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AUDIT RISK ALERTS

AICPA

AMERICAN INSTITUTE OF CERTIFIED PUBLIC ACCOUNTANTS

High-Technology Industry Developments—1998/99

Notice to Readers

This Audit Risk Alert is intended to provide auditors of financial statements of high-technology businesses with an overview of recent economic, industry, regulatory, and professional developments that may affect the audits they perform. This document has been prepared by the AICPA staff. It has not been approved, disapproved, or otherwise acted on by a senior technical committee of the AICPA.

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Technical Manager
Accounting and Auditing Publications

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High-Technology Industry Developments—1998/99

Industry and Economic Developments

What significant industry and economic events and conditions have occurred recently that are relevant to the audits of high-technology entities?

Even though the term *high-technology* is not precisely defined, it is generally considered to refer to activities that employ scientific theories and applications to develop new products that enhance productivity. The high-technology industry, according to the American Electronics Association, includes nine subgroups of manufacturing: computers, consumer electronics, communications equipment, electrical components, semiconductors, defense electronics, industrial electronics, electromedical equipment, and photonics, and two subgroups of services: telecommunications services, and software and computer services. Shown in the following sections are brief descriptions of current events in some of these industries, followed by a discussion of some of the resulting audit issues that are generally applicable to many segments of the high-technology industry.

Computers and Peripherals

The computer and peripherals segment has had a difficult year. Industry analysts expect worldwide unit volume for personal computers (PCs) to increase 11 percent to 14 percent over 1997, a drop from the high-teens increase of last year. Also, many entities in this segment had to deal with excess inventories from the beginning of the year, along with price cutting, and a growing demand for PCs costing less than a thousand dollars. Not only have these conditions put pressure on margins for computer makers, but they also may accelerate the rate of return and price protection claims from resellers. One of the difficult issues in the computer and peripherals segment of the industry, and some other high-technology areas as well, is estimating the amount of returns and price protection claims.

This difficulty results because it is difficult to know the amount of inventory that is still in the distributor channels that will not be sold and will be returned. In such circumstances, auditors should consider the guidance in Statement on Auditing Standards (SAS) No. 57, *Auditing Accounting Estimates* (AICPA, *Professional Standards*, vol. 1, AU sec. 342). Also, a discussion of Financial Accounting Standards Board (FASB) Statement of Financial Accounting Standards No. 48, *Revenue Recognition When Right of Return Exists* (FASB, *Current Text*, vol. 1, sec. R75), is included in the section titled "Revenue Recognition" in the "Accounting Issues and Developments" section of this Audit Risk Alert. Another related issue is: If the manufacturers push too much inventory to distributors and it ends up being returned, this could affect the valuation of inventory at lower of cost or market.

In the international market, the slumping economies in Asia have affected the computer and peripherals industry. Although this area has previously shown significant growth, accounting for 20 percent to 25 percent of product sales, sales in Asia have deteriorated. Also, revenue from sales already made in Asia may also be affected, in that the related receivables may experience a high rate of credit loss.

Some industry analysts foresee a possible bounce back later this year and into 1999, predicated on inventory levels moving back to normal and strong consumer demand for PCs selling at less than $1,000. However, although unit sales may increase, it is also likely that revenue may be down in 1999 due to business customers spending on correcting the year 2000 problem and on modifying financial information systems for the Euro[1] currency, at the expense of spending on new hardware.

Semiconductors

This year has also been difficult for the semiconductor industry, with analysts forecasting double-digit rates of decline in sales revenue for 1998. Reasons for the poor results include the following:

1. On January 1, 1999, the European Economic and Monetary Union (EMU) goes into effect. Under the EMU, only one reporting currency will exist—the Euro. From that point on, every entity that trades with or has subsidiaries in Europe will be affected by the change to a common currency. A discussion of this issue is included in *Audit Risk Alert—1998/99*.

- Excess plant capacity, resulting in falling prices for some products. The previous expansion in demand for semiconductors for use in PCs and other products led to large business investments in high-production facilities.
- The countries in Asia, formerly emerging sales markets, have become significant competitors in the semiconductor industry.
- Profit margins have been affected by the popularity of the inexpensive computers because margins for microprocessors and other components for the cheaper PCs tend to be lower than those of the more powerful and expensive models.

The above-mentioned overcapacity for some products, such as memory chips, has resulted in the closing of facilities or the scaling back of facilities commitments. These circumstances may call into question the recoverability of the carrying amount of certain plant assets. Accordingly, auditors should evaluate the client's consideration of the guidelines set forth under FASB Statement No. 121, *Accounting for the Impairment of Long-Lived Assets and for Long-Lived Assets to Be Disposed Of* (FASB, *Current Text*, vol. 1, sec. I08).

Also, in these circumstances, manufacturing need may have decreased to the degree that it affects such matters as the number of employees or the amount of plant capacity needed. Accordingly, the auditor should consider whether management has addressed relevant accounting guidance, including the FASB's Emerging Issues Task Force (EITF) Issue 94-3, *Liability Recognition for Certain Employee Termination Benefits and Other Costs to Exit an Activity (Including Certain Costs Incurred in a Restructuring)*.

Also, if prices drop due to such factors as overcapacity, inventories may not be properly stated at lower of cost or market valuation.

However, some analysts predict that the semiconductor industry is likely to bounce back in 1999, as capacity declines. Also, some expect that over the next few years, the dominance of PCs in driving the semiconductor industry will decline. The growing markets for semiconductors include telecommunications, data networking, consumer-electronics, and Internet access appliances.

Electronic Products and Components

Although many people think primarily about computers when using the term *high technology*, many types of electronics products and electrical components use sophisticated and cutting-edge technology, and can be considered part of the high-technology market. Electrical components include electron tubes, printed circuit boards, electronic capacitors, electronic resistors, transformers, and other such items, which are used in many industries, including computers, telecommunications, medical equipment, and consumer products.

Product oversupply, price competition, and reduced demand have resulted in a difficult year for electronics entities. The constantly changing uses of electronic components also results in risks for electronics manufacturers, as product demand can change rapidly. Products become obsolete more quickly as new products take hold. As in other areas of the high-technology industry, significant expenditures are needed for research and development to be ready for the next product wave. However, some analysts predict that the increasing number of electronic components in various products will benefit this segment going forward.

Computer Software and Services

Because the computer software and services segment of the high-technology industry usually makes about one quarter of its sales outside the U.S., it has also been hurt by the problems overseas, particularly in Asia. This includes the effect of the Asian crisis on U.S. customers that may cut spending plans on computer software and services. Other problems faced by entities in this industry segment this year may include—

- A decrease in spending by customers on computer software and services to offset increases in spending on fixing potential problems from the Year 2000 Issue and the conversion to the Euro.

- The potential that the year 2000 problem will cause errors in computer application products and services sold to customers.

See the section titled "The Year 2000 Issue" in the "Audit Issues and Developments" portion of this Audit Risk Alert, which discusses the various aspects of this problem, including the increased risk of litigation.

However, some segments of the industry may also benefit from both the year 2000 problem and the Euro conversion. Entities that are successfully addressing the issues with computer applications, consulting, and installation services may see revenue increases in the near term. However, the resulting growth rate for these entities may not be sustainable over the long-term.

As purchasers of computer software and services address rapid changes in technology and need more computer support to function efficiently in a more computer-oriented environment, the transactions entered into by computer software and services companies can also become more complex. For example, an arrangement to deliver software or a software system may require significant production, modification, or customization of software, or the software arrangement may consist of multiple elements, such as additional software products, upgrades, and postcontract customer support. Other types of changes (for example, the conversion to the Euro) also may present situations in which customers require upgrades. Issues such as these can make the accounting for software revenue more complex also. A further discussion of some of these revenue recognition issues is included in the section titled "Revenue Recognition" in the "Accounting Issues and Developments" section of this Audit Risk Alert.

Also, many companies are choosing to focus on their main operations, and outsourcing specific functions, such as payroll processing, or the entire data processing operations, to software service providers. Auditors of such software service providers, as well as the auditors of the service providers' clients, should be familiar with the requirements of SAS No. 70, *Reports on the Processing of Transactions by Service Organizations* (AICPA, *Professional Standards*, vol. 1, sec. 324). SAS No. 70 provides guidance on the factors an independent auditor should consider when auditing the financial statements of an entity that uses a service organization to process certain transactions. SAS No. 70 also provides guidance for independent auditors who issue reports on the processing of transactions by a service organization for use by other auditors.

Internet Services

Internet usage is increasing rapidly, primarily due to the availability of low-cost PCs. Because of low barriers to entry, entities can easily enter this market. With the increase in start-up enterprises involved in the Internet industry, the auditor may need to assess management's consideration and application of relevant standards, such as the guidance set forth in FASB Statement No. 7, *Accounting and Reporting by Development Stage Enterprises* (FASB, *Current Text,* vol. 2, sec. De4), and AICPA Statement of Position (SOP) 98-5, *Reporting on the Costs of Start-Up Activities.*

This industry changes rapidly and substantial expenditures are needed to build traffic levels. Although some entities are still unprofitable, investors may see them as successful when looking at the number of visits on their sites, rather than their earnings (which usually come from subscriber fees or advertisers who pay to be on the site). Stock prices can have significant fluctuations even though there has been no change in the entity's financial status, and the price/earnings ratio on Internet stocks often far exceed that of other technology entities.

Although there has been some significant merger activity in the high-technology industry in general, the Internet segment has been one of the areas particularly affected by this trend (others include the telecommunications and software segments). Some of the accounting treatment, in particular, that concerning in-process research and development, has been called into question by the SEC. A further discussion of this issue is included in the section titled "In-Process Research and Development in a Purchase Business Combination" in the "Accounting Issues and Developments" portion of this Audit Risk Alert.

Telecommunications Services

Competition in the telecommunications industry has been, and will continue to be, affected by the Telecommunications Act of 1996 (the Act). The Act was passed with the intention of deregulating and fostering competition in the telecommunications market. It provides that long-distance and local phone companies can enter each other's markets. The local exchange carriers (LECs), primarily the regional Bell operating companies (RBOCs), cannot offer long-distance services to local customers until they first open up their own markets to allow for local competition. Some RBOCs are attempting to win federal approval to provide long-distance services to local customers. However, none has yet been successful in convincing the Federal Communications Commission (FCC) that it has opened up its markets to competition, which is a requirement before being allowed to offer long-distance service to local customers.

In response to the market deregulation and changes in technology, there is a growing trend for various types of telecommunications entities to offer new services. For example—

- The RBOCs are attempting to win federal approval to enter long-distance markets.
- Cable companies are entering the phone service business.
- Long-distance phone companies are entering into mergers with cable companies to obtain the local infrastructure needed to provide local phone services and other services, such as Internet and data services, without going through the LECs.

Many entities in the telecommunications industry want to offer new services, including complete packages of local, long-distance, and international voice service, cable access, Internet and data services, and interactive video. To do so, they may need to replace old equipment. Accordingly, auditors should consider whether the client has, where applicable, properly accounted for such circumstances and events pursuant to the guidelines set forth under FASB Statement No. 121.

There are also significant issues with respect to the FCC's auction of personal communications services (PCS) licenses. PCS is a cellular service, except it is entirely digital and may use a higher frequency spectrum. These licenses were sold in blocks (A through E) that have specific requirements to cover a percentage of the potential subscribers by fixed dates or forfeit the license. The auction of C block licenses brought higher prices than previous block auctions. Many of the C block licensees cannot pay the fees, and some have filed for bankruptcy. In June of 1998, debtor C block licensees had to chose from various options offered by the FCC to address their debts, such as returning the license. In addition to paying attention to the terms of the client's PCS license, auditors of C block licenses need to pay attention to the option selected by the client in order to assess the manner in which the elements of that transaction, such as a forfeited deposit, have been accounted for. The auditor may also need to address going-concern issues.

Telecommunications Equipment

Because equipment manufacturers are so heavily affected by the telecommunications entities, auditors might benefit from an understanding of the developments in both industries and how they work together. For example, the local phone service business is still dominated by a few large carriers, which may increase their ability to bargain or renegotiate contract terms. Equipment suppliers may have committed significant amounts of resources in fulfilling a contract with one of the large telecommunications entities, which may have more bargaining power than originally intended. These goods may not be saleable elsewhere, and contract or product changes, such as a right of return, may be allowed that were not originally anticipated.

On the other side are the risks faced by telecommunications equipment manufacturers when dealing with the small, start-up telecommunications entities, in particular, the radiotelephone communications entities, such as cellular, paging, and personal communications services entities. Some of these start-up telecommunications entities often want the equipment manufacturers to help finance purchases by allowing long-term receivables, leasing arrangements, and other arrangements. Special sales arrangements and their effect on revenue recognition may need to be considered by the auditor.

See a further discussion of revenue recognition issues in the section titled "Revenue Recognition" in the "Accounting Issues and Developments" portion of this Audit Risk Alert.

Executive Summary—Industry and Economic Developments

- Many entities in the high-technology industry may be experiencing uncertainty regarding continued profitability due to such factors as decreasing profit margins and heavy competition. A further discussion of these issues is included in the section titled "Going Concern Issues" in the "Audit Issues and Developments" portion of this Audit Risk Alert.
- The Asian crisis, the resulting pressures on other economies, and the recent troubles in Russia and Latin America have numerous implications for the high-technology industry. See the discussion in the section titled "The Crisis in Asia" in the "Audit Issues and Developments" portion of this Audit Risk Alert.
- In many segments, particularly telecommunications and Internet, there is significant merger activity. A more detailed discussion of this issue is included in the section titled "Business Combinations" in the "Audit Issues and Developments" portion of this Audit Risk Alert.
- Rapid changes in technology are common to the high-technology industry and can affect inventory obsolescence and increase returns. See the section titled "Inventory Valuation" in the "Audit Issues and Developments" portion of this Audit Risk Alert. Also see the discussion of revenue recognition when right of return exists in the section titled "Revenue Recognition" in the "Accounting Issues and Developments" portion of this Audit Risk Alert.
- The rapid changes in technology also create a need to provide additional products and services, such as upgrades and postcontract customer support. The auditor should note that this issue is also applicable to entities other than traditional software providers. See the section titled "Revenue Recognition" in the "Accounting Issues and Developments" section of the Audit Risk Alert for additional information on accounting for these types of arrangements.
- The year 2000 problem can present both risks and opportunities—the risk of year 2000 problems affecting operations, products, and services, and the opportunities to solve those problems for clients. This issue is discussed in the section titled "The Year 2000 Issue" in the "Audit Issues and Developments" portion of this Audit Risk Alert.

Legislative and Regulatory Developments

Federal Communications Commission Issues

What significant recent events have occurred involving the high-technology industry segments regulated by the FCC?

The FCC regulates aspects of many industries, including cable, satellite, wireless, telecommunications common carriers, and broadcasting. As the industry changes and technology advances, the regulations will also change. These changes may have significant effects on high-technology clients. They may be allowed to compete in new areas; previously unregulated services may be regulated; competition may increase significantly as markets are opened up; or competition may even decrease if an allowed merger results in control by one or a few entities of a segment of the market. Two areas that continue to be rapidly changing are the regulations under the Telecommunications Act of 1996 (the Act) and access to the Internet from Internet service providers.

The Telecommunications Act of 1996

On February 1, 1996, Congress passed the Act, which represented the first-ever comprehensive rewrite of United States communications law and is the most sweeping reform of FCC policy enacted in decades. The Act was passed with the intention of deregulating the telecommunications market to foster competition at the local level while allowing the RBOCs access to the long-distance market. Among its provisions is that an RBOC is barred from providing long-distance service to its local customers. The Act says an RBOC must open its market to competitors and obtain FCC approval before it may provide long-distance services to local customers. No RBOC has received FCC approval.

Although competition is increasing, over 90 percent of the revenue from wireline service is still controlled by fewer than a dozen large companies, including the RBOCs and a few large long-distance companies. However, there are many smaller wired and wireless telephone services companies, some using leased lines or reselling services of other providers.

What has made the increase in competition so slow may be the regulatory and legal confrontations surrounding the implementation of the Act. As these events unfold, they can directly affect clients in this industry segment. A few of the recent court decisions and events are highlighted here:

- In August, the U.S. Court of Appeals for the Eighth Circuit in St. Louis upheld the FCC's decision requiring the Baby Bells to share with competitors access to their network's full capabilities, not just leased access to a portion of the networks.
- In August, the U.S. Court of Appeals for the Eighth Circuit in St. Louis upheld certain FCC regulations meant to lower long-distance telephone rates by lowering access charges paid by the long-distance companies to the LECs.
- In October, the Supreme Court heard arguments covering various aspects of the FCC's "interconnection order," which required that local telephone companies offer discounts to competitors that want to use their networks. The interconnection order also gave most of the jurisdiction regarding pricing to the FCC rather than the states. The U.S. Court of Appeals for the Eighth Circuit in St. Louis had previously ruled that the FCC overstepped its bounds in setting local competition price rules and vacated key provisions of the order.

As can be seen from these examples, in this continuously changing environment, new issues continue to be raised for resolution by the courts. Their decisions can have dramatic effects on clients in the high-technology field. Auditors need to continue to monitor developments and their effects on clients.

Internet Services

Because technology is changing so rapidly, the FCC is sometimes faced with attempting to apply rules that were not drafted to take these changes into account. One such situation is the area of Internet services delivered over cable-television wires. In September, the FCC issued a working paper to obtain industry and consumer comment to help it answer the question, Is Internet over cable a cable service, a telecommunications service, or an information service?

- If defined as cable services, these services may be subject to regulatory oversight. Also, as cable services they may be forced to pay franchise fees to local governments, which would, in turn, raise consumer prices for cable Internet services.
- If they are regulated as telecommunication carriers, they may be required to share their networks with competitors.
- If they are considered information services, they may be exempt from regulation.

The significance of this issue will become greater over time because, according to some researchers, it is estimated that within the next four years, about 25 percent of all U.S. households will use high-speed connections to access the Internet, and cable companies will have an 80 percent share of the residential fast Internet market.

Millennium Bug Legislation

What action has Congress taken to help deal with the Year 2000 Issue?

A bill recently signed by President Clinton, called the Year 2000 Information and Readiness Disclosure Act, is intended to encourage businesses to share information on how to deal with the year 2000 computer crisis. As a result, the problem may be addressed more quickly. Among its provision, the bill—

- Establishes a government Web site as a clearinghouse for basic information for consumers, small businesses, and local government.
- Offers limited liability protection for companies that share information about the year 2000 problem that they believe, at the time, is true, even though it may later turn out not to be.
- Creates an antitrust exemption for certain year-2000-preparation activities.

This bill may help high-technology entities to resolve some of the problems they are expected to experience on January 1, 2000. For a further discussion, see the section titled "The Year 2000 Issue" in the "Audit Issues and Developments" portion of this Audit Risk Alert.

Audit Issues and Developments

Going-Concern Issues

Does the current industry and economic environment pose additional considerations regarding an entity's ability to continue as a going concern, and what impact will this have on audits of high-technology entities?

The high-technology industry exists in an environment typified by rapidly changing technologies (for example, product design and manufacturing processes), high levels of competition, large expenditures on research and development, and changing government regulations. This year, segments of the industry also had to deal with the crisis in Asia and product oversupply. Factors such as these may affect a high-technology entity's ability to continue as a going concern.

Accordingly, auditors should be alert to conditions and events that, when considered in the aggregate, indicate that there could be substantial doubt about their client's ability to continue as a going concern. For example, such conditions and events could include (1) negative trends, such as recurring operating losses or working capital deficiencies; (2) financial difficulties, such as loan defaults or denial of trade credit from suppliers; (3) internal matters, such as substantial dependence on the success of a particular project; or (4) external matters, such as loss of a principal customer or supplier. In such circumstances, auditors will have to consider whether, based upon such conditions and events, there is substantial doubt about the client's ability to continue as a going concern.

Auditors should be aware of their responsibilities pursuant to SAS No. 59, *The Auditor's Consideration of an Entity's Ability to Continue as a Going Concern* (AICPA, *Professional Standards*, vol. 1, AU sec. 341). SAS No. 59 provides guidance to auditors in conducting an audit of financial statements in accordance with generally accepted auditing standards for evaluating whether there is substantial doubt about a client's ability to continue as a going concern for a period not to exceed one year from the date of the financial statements being audited.

Continuation of an entity as a going concern is generally assumed in the absence of significant information to the contrary. Information that significantly contradicts the going-concern assumption relates to the entity's inability to continue to meet its obligations as they become due without substantial disposition of assets outside the ordinary course of business, restructuring of debt, externally forced revisions of its operations, or similar actions. SAS No. 59 does not require the auditor to design audit procedures solely to identify conditions and events that, when considered in the aggregate, indicate there could be substantial doubt about the entity's ability to continue as a going concern for a reasonable period of time not to exceed one year beyond the date of the financial statements being audited. The results of auditing procedures designed and performed to achieve other audit objectives should be sufficient for that purpose.

If there is substantial doubt about the entity's ability to continue as a going concern, the auditor should consider whether it is likely that existing conditions and events can be mitigated by management plans and whether those plans can be effectively implemented. If the auditor obtains sufficient competent evidential matter to alleviate doubts about going-concern issues then consideration should be given to the need for disclosure of the principal conditions and events that initially caused the auditor to believe there was substantial doubt. If, however, after considering identified conditions and events, along with management's plans, the auditor concludes that substantial doubt about the entity's ability to continue as a going concern remains, the audit report should include an explanatory paragraph to reflect that conclusion. In these circumstances, auditors should refer to the specific guidance set forth under SAS No. 59.

Executive Summary—Going-Concern Issues

- Pursuant to SAS No. 59, when conducting an audit of financial statement in accordance with generally accepted auditing standards the auditor has a responsibility to evaluate whether there is a substantial doubt about the entity's ability to continue as a going-concern.
- Continuation of an entity as a going concern is assumed in the absence of significant information to the contrary.

- The economic and industry environment for high-technology entities may result in information about conditions or events that contradicts the going-concern assumption.
- SAS No. 59 provides guidance to the auditor with respect to making the above-mentioned evaluation.

The Crisis in Asia

Will the Asian crisis have an impact on high-technology audits this year?

The Asian crisis was one of the most significant economic developments in 1998, and there is continued speculation on how these developments will affect the U.S. economy. Many high-technology entities have been affected by the economic conditions in Asia. High-technology exports to countries in Asia are down significantly, although exports to the European Union, Canada, Mexico, and China have helped lessen the impact. Businesses dealing in computers, peripherals, and semiconductors, in particular, have typically had significant sales to Asia. In addition to the decreasing sales in Asia, the deep recessions plaguing a number of Asian countries pose a potential threat to continued growth in various segments of the global economy, including the U.S. This economic turmoil may result in broad concerns for auditors in general, and auditors of high-technology entities in particular. Some of these concerns are discussed here.

As auditors consider the events and relate them to their audits of high-technology entities, they should be aware of their responsibilities pursuant to the guidance set forth in SAS No. 22, *Planning and Supervision* (AICPA, *Professional Standards*, vol. 1, AU sec. 311). SAS No. 22 requires, in part, that in planning the audit, the auditor should consider matters affecting the industry in which the entity operates, including current economic conditions. As such, auditors should assess the potential impact that the Asian crisis may have on their clients when considering the nature, extent, and timing of work to be performed. Factors to be considered in making the assessment might include whether Asian businesses are among the high-technology client's major customers or suppliers, the extent to which the client's products or services compete with low-priced Asian imports, or indirect effects, such as the extent to which a client's major customer is dependent on Asian trade.

If it appears likely that the Asian crisis may have an impact on any aspect of the high-technology client's operations, consideration should be given to the possible audit and accounting issues that might arise. Examples could include some of the following:

- High-technology entities with significant export activities curtailed by the Asian crisis, such as some entities that sell PCs, may experience declines in the salability of their inventory and hence its valuation. Auditors should ensure that such inventories have been properly valued at the lower of historical cost (using an acceptable cost-flow assumption) or market.

- High-technology entities whose products compete with lower cost Asian products, such as some entities that sell semiconductors, may experience declines in the salability of their inventory and hence its valuation. Auditors should ensure that such inventories have been properly valued at the lower of historical cost (using an acceptable cost-flow assumption) or market.

- The economic crisis in Asia may affect the operations of entities in Asia that supply goods to the U.S., in a manner that results in a lowering of quality standards or delays in shipping. For example, high levels of exports from Asia may affect the ability to provide timely shipments if there is a shortage of shipping capacity. These types of situations could affect the quality of the client's inventory, commitments to customers, and so forth. Among the possible results is that disputes leading to legal action may arise with customers and suppliers over such matters. Information regarding such issues may point to the existence of a condition, situation, or set of circumstances indicating an uncertainty as to the possible loss to an entity arising from litigation, claims, and assessments, pursuant to SAS No. 12, *Inquiry of a Client's Lawyer Concerning Litigation, Claims,* *and Assessments* (AICPA, *Professional Standards*, vol. 1, AU sec. 337).

- The collectibility of amounts due from troubled Asian entities or from entities with significant reliance on Asian trade may be called into question. Auditors should carefully consider whether management has properly assessed the collectibility of these receivables, as well as whether adequate consideration has been given to possible loan-impairment issues pursuant to FASB Statement No. 114, *Accounting by Creditors for Impairment of a Loan (an amendment to FASB Statements No. 5 and 15)* (FASB, *Current Text*, vol. 1, sec. I08)

- Going-concern issues may arise for high-technology entities with significant reliance on Asian trade or whose major customers have such reliance. In addition, entities whose products compete directly with less expensive Asian imports may also be at risk. In such circumstances, auditors should consider the guidance set forth under SAS No. 59, *The Auditor's Consideration of an Entity's Ability to Continue as a Going Concern.*

- FASB Statement No. 121, *Accounting for the Impairment of Long-Lived Assets and for Long-Lived Assets to Be Disposed Of,* requires that long-lived and certain identifiable intangible assets to be held and used by an entity be reviewed for impairment whenever events or changes in circumstances indicate that the assets' carrying amount may not be recoverable. For some entities, the Asian crisis may represent a significant adverse change in the business climate that indicates that the recoverability of the carrying amount of an asset should be assessed. Auditors should evaluate management's consideration of FASB Statement No. 121 issues for assets that are directly or indirectly affected by the Asian crisis.

- The appropriate classification of investments in debt and equity securities of Asian entities, or entities with material dealings with Asian entities accounted for under FASB Statement No. 115, *Accounting for Certain Investments in Debt and*

Equity Securities (FASB, *Current Text*, vol. 1, sec. I80), could be an area of increased audit risk. There may be a greater risk of inappropriate classification of such securities as available-for-sale rather than as trading securities, so that any unrealized losses are reported in other comprehensive income rather than in current earnings. SAS No. 81, *Auditing Investments* (AICPA, *Professional Standards*, vol. 1, AU sec. 332), provides auditing guidance for investments accounted for under FASB Statement No. 115, as well as Accounting Principles Board (APB) Opinion No. 18, *The Equity Method of Accounting for Investments in Common Stock* (FASB, *Current Text*, vol. 1 sec. I82).

- Greater risk may be associated with entities involved in Asian foreign-currency-related transactions. Auditors should consider whether management has appropriately accounted for, and made all required disclosures relating to, foreign-currency translation and transactions arising from the translation of asset and liability positions and revenue and expense transactions in currencies other than the U.S. dollar pursuant to FASB Statement No. 52, *Foreign Currency Translation* (FASB, *Current Text*, vol. 1, sec. F60).

- For some clients, the economic impact of the Asian crisis may engender fraud risk factors that suggest an increased possibility of misstatements arising from fraudulent financial reporting. For example, to offset losses incurred from a slowdown in sales to Asian customers, an entity may resort to the inappropriate acceleration of revenue recognition or the improper deferral of expenses. SAS No. 82, *Consideration of Fraud in a Financial Statement Audit* (AICPA, *Professional Standards*, vol. 1, AU sec. 316) sets forth the auditor's responsibilities concerning fraud in a financial statement audit.

- The Asian crisis is likely to result in a more risks and uncertainties for many entities, particularly with regard to current vulnerability due to certain concentrations. Auditors should consider whether management has appropriately evaluated all such risks and uncertainties and made the necessary disclosures pursuant to SOP 94-6, *Disclosure of*

Certain Significant Risks and Uncertainties. In addition, auditors should also evaluate management's consideration of related contingencies arising from the Asian crisis, pursuant to FASB Statement No. 5, *Accounting for Contingencies* (FASB, *Current Text*, vol. 1, sec. C59).

These examples call attention to some of the possible auditing and accounting implications of the Asian crisis, but should not be viewed as an exhaustive list of all the issues that might arise. Auditors of high-technology entities should continue to monitor the crisis and assess its impact on their clients by considering all relevant facts and circumstances.

Executive Summary—The Crisis in Asia

- The deep recessions plaguing a number of Asian countries (commonly referred to as the Asian crisis) pose a potential threat to continued growth in various segments of the global economy, including the U.S.
- Auditors should assess the potential impact that the Asian crisis may have on their high-technology clients when considering the nature, extent, and timing of work to be performed.
- Auditors should consider the possible audit and accounting issues that might arise as a result of the Asian crisis, including going concern, valuation, impairment, collectibility, and fraud.

Risk of Material Misstatement Due to Fraud

Why is the risk of client fraud of particular concern to auditors of high-technology entities?

As a general rule, technology is a high-profile industry. A significant amount of business news coverage is devoted to this industry, and changes in the share prices of the technology group of stocks are often a matter of general business interest. It is also seen as a growth industry and expected to grow at rates in excess of more mature industries. The continual scrutiny and the pressure to meet market expectations is one factor that may lead to additional concerns on the part of the auditor that there has been no material misstatement of earnings.

Failing to meet market expectations can have a significant effect on the value of the company's stock and the value of employee stock options, which are often a significant portion of total management compensation in high-technology entities. Even minimal changes in share price can affect perceptions of how well the company's products are accepted by consumers and affect consumer decisions about continuing to buy products based on the company's technology. Entities that are considering merger activity, which is common in the high-technology industry, may also be concerned about reported earnings. Entities that may be potentially acquiring another entity or that are potential targets of an acquisition may be concerned about reporting expected earnings in a way that does not negatively affect potential acquisition plans. Additionally, some high-technology entities have earnings pressures resulting from poor sales, declining margins, increased competition, turbulent overseas economies, and so forth. Notice that many of the issues discussed above are not related to poor earnings, merely earnings not in line with expectations.

Among its provisions, SAS No. 82, *Consideration of Fraud in a Financial Statement Audit*, provides categories of fraud risk factors that the auditor should consider in assessing the risk of material misstatement due to fraud. Shown here are a few of the many possible risk factors in SAS No. 82 that may be of significance to a particular high-technology audit client:

- A significant portion of management's compensation represented by bonuses, stock options, or other incentives, the value of which is contingent upon the entity achieving unduly aggressive targets for operating results, financial position, or cash flow
- An excessive interest by management in maintaining or increasing the entity's stock price or earnings trend through the use of unusually aggressive accounting practices
- A practice by management of committing to analysts, creditors, and other third parties to achieve what appear to be unduly aggressive or clearly unrealistic forecasts

- Domination of management by a single person or small group without compensating controls, such as effective oversight by the board of directors or audit committee
- New accounting, statutory, or regulatory requirements that could impair the financial stability or profitability of the entity
- High degree of competition or market saturation, accompanied by declining margins
- Rapid changes in the industry, such as high vulnerability to rapidly changing technology or rapid product obsolescence
- Significant pressure to obtain additional capital necessary to stay competitive considering the financial position of the entity—including need for funds to finance major research and development or capital expenditures
- Significant, unusual, or highly complex transactions, especially those close to year end, that pose difficult "substance over form" questions
- Unusually rapid growth or profitability, especially compared with that of other companies in the same industry
- Adverse consequences on significant pending transactions, such as a business combination or contract award, if poor financial results are reported
- Inventory characteristics, such as small size, high value, or high demand

In an effort to assist auditors in the understanding of SAS No. 82, the AICPA has developed the following materials:

- *Considering Fraud in a Financial Statement Audit: Practical Guidance for Applying SAS No. 82* (Product No. 008883). This AICPA publication provides nonauthoritative guidance to practitioners on considering fraud in financial statement audits. This publication provides implementation guidance, industry-specific risk factors (along with suggested audit responses) and various practice aids (audit procedures, sample workpaper documentation, and engagement and representation letters).

- *Consideration of Fraud in a Financial Statement Audit: The Auditor's Responsibilities Under SAS No. 82.* This continuing professional education course is available in a text version (Product No. 732046) and a CD-ROM version (Product No. 738080).

Executive Summary—Risk of Material Misstatement Due to Fraud

- The high-profile nature of the technology industry and the expectations of high growth may result in additional pressure on high-technology entities to meet market expectations and additional concerns on the part of the auditor regarding material misstatement of earnings.
- Auditors should be familiar with the requirements of the new fraud standard, SAS No. 82, *Consideration of Fraud in a Financial Statement Audit,* which provides, among other things, that auditors specifically assess the risk of material misstatement due to fraud in every audit.
- SAS No. 82 provides examples of fraud risk factors to assist the auditor in making this assessment.
- The AICPA has produced various materials to assist the auditor in understanding SAS No. 82.

Business Combinations

How does the trend toward merger and consolidation in the high-technology industry affect auditors of high-technology entities?

There has been significant merger activity in the high-technology industry recently, as entities attempt to increase market share, gain access to new markets, or acquire the knowledge or the infrastructure they to keep competitive. In particular, there have been some high-profile mergers in the telecommunications and the Internet industry segments. As a result, auditors of high technology entities face a greater likelihood of dealing with clients that were involved in a business combination in the last year and with clients facing an upcoming business combination. The following is a discussion of some of the issues relating to business combinations that the auditor may be facing.

A business combination, according to APB Opinion 16, *Business Combinations* (FASB, *Current Text*, vol. 1, sec. B50), occurs when a corporation and one or more incorporated or unincorporated businesses are brought together into one accounting entity. The single entity that results carries on the activities of the previously separate, independent enterprises. The auditing and accounting issues that arise out of corporate consolidations are numerous and varied. Auditors should carefully consider the individual circumstances of the client to identify those issues and to then develop an appropriate audit strategy. Examples of some of the issues that should be considered by auditors include the following:

- Careful consideration should be given to management's accounting for the business combination to ensure that all relevant generally accepted accounting principles (GAAP) have been considered, and for publicly-held entities, all relevant SEC rules and regulations should be considered also. For example, if the pooling-of-interests method has been used, have the specific criteria of APB Opinion 16 been met?[2] If not, has the purchase price been allocated to the assets (including identifiable intangibles) and liabilities acquired with goodwill properly calculated in accordance with the purchase method of accounting?

- If specialists have been used in asset or liability valuation, auditors relying on such information should understand their responsibilities when using the work of a specialist, as set forth under SAS No. 73, *Using the Work of a Specialist* (AICPA, *Professional Standards*, vol. 1, AU sec. 336).

- The question of the valuation and the subsequent write-off of in-process research and development have been an area of particular concern for the SEC recently, particularly with respect to high-technology companies. Accordingly, audit

2. Accountants, other than the continuing accountant, who have been requested to provide advice on the application of accounting principles to specified transactions, such as whether a proposed business combination is in compliance with the pooling requirements of APB Opinion 16 and other related GAAP, should refer to the guidance set forth under SAS No. 50, *Reports on the Application of Accounting Principles* (AICPA, *Professional Standards*, vol. 1, AU sec. 625).

risk in this area may be especially acute for publicly-held high-technology entities. See the section titled "In-Process Research and Development in a Purchase Business Combination" in the "Accounting Issues and Developments" portion of this Audit Risk Alert.

- Auditors should also be alert to consensus positions reached this year by the FASB's EITF relating to business combinations. See the "EITF Consensus Positions" section of the publication *Audit Risk Alert—1998/99*[3] for more information.

- With consolidation comes dramatic change in the structure of an entity. In an effort to create greater cost efficiencies in the consolidated entity, departments may be combined and duplicative functions eliminated. Auditors should consider the impact of such changes on their client's internal control when making the assessment of control risk. SAS No. 55, *Consideration of Internal Control in a Financial Statement Audit* (AICPA, *Professional Standards*, vol. 1, AU sec. 319), as amended by SAS No. 78, *Consideration of Internal Control in a Financial Statement Audit, An Amendment to Statement on Auditing Standards No. 55* (AICPA, *Professional Standards*, vol. 1, AU sec. 319), provides guidance on the auditor's consideration of an entity's internal control in an audit of financial statements in accordance with generally accepted auditing standards (GAAS).

- Business combinations often result in the gain of a client for one auditor and a loss of a client for another. Thus, in the current environment, auditors may be more likely to find themselves in the role of either a predecessor or successor auditor. SAS No. 84, *Communications Between Predecessor and Successor Auditors* (AICPA, *Professional Standards*, vol. 1, AU sec. 315), provides guidance on communications between predecessor and successor auditors when a change of auditors is in process or has taken place.

3. The *Audit Risk Alert—1998/99* (Product No. 022223) provides a general update on economic, auditing, and accounting matters.

- Mergers and acquisitions may be effected in part through the use of debt financing. Auditors should carefully evaluate the terms of the debt agreement to identify, among other things, whether there are any loan covenants, and if so, the terms. Auditors should evaluate compliance with restrictive covenants and the implications of any loan covenant violations.

- The acquisition of an entity by one party may mean that another party has disposed of a business segment. Accordingly, auditors of the selling party should consider whether management has followed the accounting and disclosure requirements of APB Opinion 30, *Reporting the Results of Operations—Reporting the Effects of Disposal of a Segment of a Business, and Extraordinary, Unusual and Infrequently Occurring Events and Transactions* (FASB, *Current Text*, vol. 1, sec. I13). Audit risk may be significant for discontinued operations involving an extended phase-out period. Auditors should give careful consideration to management's estimates when the disposal date of the segment occurs after yearend. SAS No. 57, *Auditing Accounting Estimates*, provides guidance on obtaining and evaluating sufficient competent evidential matter to support significant accounting estimates.

- Subsequent to the business combination, auditors should consider whether management has prepared the financial statements of the combined entity in accordance with appropriate accounting standards, including FASB Statement No. 94, *Consolidation of All Majority-Owned Subsidiaries (an amendment of ARB No. 51, with related amendments of APB Opinion No. 18 and ARB No. 43, Chapter 12)* (FASB, *Current Text*, vol. 1, sec. C51) and Accounting Research Bulletin (ARB) No. 51, *Consolidated Financial Statements* (FASB, *Current Text*, vol. 1, sec. C51).

- A business combination involving a public business enterprise may result in an operating segment subject to the disclosure requirements of FASB Statement No. 131, *Disclosures about Segments of an Enterprise and Related Information* (FASB, *Current Text*, vol. 1, sec. S30). In such circumstances, auditors should consider the guidance set forth under auditing Interpretation No. 4, "Applying Auditing Procedures to Segment Disclosures in Financial Statements," of SAS No. 31, *Evidential Matter* (AICPA, *Professional Standards,* vol. 1, AU sec. 9326).

Executive Summary—Business Combinations

- The ongoing consolidations of high-technology entities suggest that auditors are more likely to face the numerous and varied issues relating to business combinations.
- Auditors should carefully consider the individual circumstances of the client to identify the auditing and accounting issues that arise out of corporate consolidations.
- Auditors should consider the possible auditing and accounting issues that might arise as a result of a business combination, including the accounting methods used, effects on internal control, predecessor and successor communications, and discontinued operations.

SEC Concerns Regarding Disclosures About Restructuring Charges and Liabilities Recognized in Connection With Purchase Business Combinations

What are some of the auditing and accounting issues of concern to the SEC regarding disclosures about restructuring charges and liabilities recognized in connection with purchase business combinations?

During informal discussions with representatives of the AICPA, the SEC staff have expressed concerns with regard to certain recurring auditing and accounting issues that they have encountered. One issue that may be of particular interest to auditors of high-technology entities is that of disclosures about restructuring charges and liabilities recognized in connection with purchase business combinations. (Additional issues are covered in the publication *Audit Risk Alert—1998/99.* Auditors of entities subject to the SEC reporting requirements may wish to consider these issues.)

When liabilities are accrued in accordance with the guidance in EITF Issue Nos. 94-3, *Liability Recognition for Certain Employee Termination Benefits and Other Costs to Exit an Activity (Including*

Certain Costs Incurred in a Restructuring), and 95-3, *Recognition of Liabilities in Connection with a Purchase Business Combination*, certain disclosures are required. The thresholds for making the required disclosures are related to the materiality of the amounts accrued or the significance of the activities that will not be continued. Therefore, when the disclosure thresholds have been met, all the disclosures are required, not just those that are individually material.

Some of the disclosures are required until the plan of termination is completed or until all actions under a plan to exit an activity or involuntarily terminate employees of an acquired company have been fully executed. For instance, under EITF Issue No. 94-3, the amount of actual termination benefits paid and charged against the liability and the number of employees actually terminated as a result of the plan to terminate the employees must be disclosed. The amount of any adjustments to the liability also must be disclosed.

The SEC staff have observed an increasing frequency of subsequent reductions to restructuring liabilities, which suggests that management may be "providing a cushion" in establishing such reserves. When reviewing management's accruals, auditors should be aware of the kinds of charges that are allowed to be accrued for pursuant to EITF Issue Nos. 94-3 and 95-3 (and other relevant accounting literature, as appropriate), and be mindful that management's estimates are not overly conservative.

Additionally, the SEC staff have stated that liabilities accrued in accordance with EITF Issue Nos. 94-3 and 95-3 are valuation accounts that should be disclosed on Schedule VIII, Valuation and Qualifying Accounts, of SEC registrants' annual reports filed on Form 10-K.

SEC Chairman Levitt's comments on this and other issues are contained in a recent speech titled *The Numbers Game*, which is available on the SEC Web site at www.sec.gov.

Also, the SEC staff is expected to issue a Staff Accounting Bulletin (SAB) on asset impairment and restructuring charges. Other SABs are expected on materiality and revenue recognition.

Inventory Valuation

How does the issue of inventory valuation affect auditors of high-technology audit clients?

The primary literature on inventory accounting is ARB No. 43, *Restatement and Revision of Accounting Research Bulletins*, chapters 3A and 4 (FASB, *Current Text*, vol. 2, sec. I78), which provides the following summary:

> Inventory shall be stated at the lower of cost or market except in certain exceptional cases when it may be stated above cost. *Cost* is defined as the sum of the applicable expenditures and charges directly or indirectly incurred in bringing inventories to their existing condition and location. Cost for inventory purposes may be determined under any one of several assumptions as to the flow of cost factors (such as first-in, first-out; average; and last-in, first-out).

Whether inventory is properly stated at lower of cost or market can be a very significant issue for high-technology audit clients because of rapid changes that can occur in many areas, and the need for entities to keep up with the newest technology. Examples of factors that may affect inventory pricing include the following:

- Changes in a products' design may have an adverse impact on the entity's older products, with older products not as salable as the newer versions.
- A competitor's introduction of a technologically advanced version of the product may decrease salability of a client's products.
- Changes in the products promoted by the industry as a whole, such as a shift from analog to digital, may affect salability.
- Changes in foreign economies that result in such situations as slowdown of sales to that region or lower-priced imports from that region, as with Asia.
- Changes in the technology to produce high-technology products can give competitors a selling-price advantage.

- Changes in regulations, such as the Telecommunications Act of 1996, could affect the competitive environment.
- The entity's own product changes may not be well researched due to the pressure to introduce new products quickly, resulting in poor sales or high returns.

The highly competitive environment and the rapid advancement of technological factors contribute to the common problem of rapid inventory obsolescence in the high-technology industry. As such, auditors should consider whether the value at which inventories are carried is appropriate.

The auditor may look at many factors in determining the proper valuation of inventories. A few examples of those factors that may be useful include the following:

- Product sales trends and expected future demand
- Sales forecasts prepared by management as compared with industry statistics
- Anticipated technological advancements that could render existing inventories obsolete or significantly reduce their value
- Inventory valuation ratios, such as gross profit ratios, inventory turnover, obsolescence reserves as a percentage of inventory, and days sales in inventory
- New product lines planned by management and their effects on current inventory
- New product announcements by competitors
- Economic conditions in markets where the product is sold
- Economic conditions in areas where competitive products are produced
- Changes in the regulatory environment
- Unusual or unexpected movements, or lack thereof, of certain raw materials for use in work-in-process inventory

- Levels of product returns
- Pricing trends for the type of products sold by the client
- Changes in standards used by the industry

Also, the auditor may need to address many other issues, including the taking of physical inventories in high-technology entities. The auditor should consider the guidance set forth in SAS No. 1, section 331, as amended, *Inventories* (AICPA, *Professional Standards*, vol. 1, sec. 331). Among the issues for the auditor's consideration are the following:

- When dealing with some difficult types of inventory, such as chemicals used in processing, the auditor may need to use take samples for outside analysis. The work of a specialist may also be needed, and the auditor should follow the guidance set forth in SAS No. 73, *Using the Work of a Specialist.*
- The extent to which raw material have been converted to work-in-process will need to be determined to access the value of the work-in-process.
- Indications of old or neglected materials or finished goods need to be considered in the valuation of the inventory.
- The client's inventory held by others will need to be considered, as well as field service inventories for use in servicing the client's products.

Executive Summary—Inventory Valuation

- Inventory valuation is a significant issue for auditors of high-technology audit clients, primarily due to the rapid rate of inventory obsolescence in this industry.
- Auditors need to be alert to potential threats to the salability of inventory, such as changes in technology or new competitors in the field with more advanced products.
- Observing the physical inventory process may require use of specialists.

Illegal Acts

What types of illegal acts should the auditor be aware of in the high-technology industry?

As with all businesses, entities in the high-technology industry are subject to numerous laws and regulations relating to such matters as environmental protection, equal employment, and price-fixing or other antitrust violations. This last area has received much media coverage recently, and should serve as a reminder to auditors of their responsibilities with respect to illegal acts by clients.

An auditor's responsibility under GAAS is explained in SAS No. 54, *Illegal Acts by Clients* (AICPA, *Professional Standards*, vol. 1, sec. 317). The term *illegal acts* as used in that SAS refers to violations of laws or governmental regulations. Illegal acts by clients are acts attributable to the entity whose financial statements are under audit or acts by management or employees acting on behalf of the entity. Illegal acts by clients do not include personal misconduct by the entity's personnel unrelated to their business activities.

Although the auditor may recognize that some client acts coming to the auditor's attention may be illegal, the determination as to whether a particular act is illegal would generally be based on the advice of an informed expert qualified to practice law or may have to await final determination by a court of law.

The SAS explains that the auditor's responsibility to detect and report misstatements resulting from illegal acts having a direct and material effect on the determination of financial statement amounts is the same as that for misstatements caused by error or fraud as described in footnote 1 in AU section 110.02, *Responsibilities and Functions of the Independent Auditor.*

With respect to other illegal acts, SAS No. 54 provides, in part:

> Entities may be affected by many other laws or regulations, including those related to securities trading, occupational safety and health, food and drug administration, environmental protection, equal employment, and price-fixing or other antitrust violations. Generally, these laws and regulations relate more to

> an entity's operating aspects than to its financial and accounting aspects, and their financial statement effect is indirect. An auditor ordinarily does not have sufficient basis for recognizing possible violations of such laws and regulations. Their indirect effect is normally the result of the need to disclose a contingent liability because of the allegation or determination of illegality. For example, securities may be purchased or sold based on inside information. While the direct effects of the purchase or sale may be recorded appropriately, their indirect effect, the possible contingent liability for violating securities laws, may not be appropriately disclosed. Even when violations of such laws and regulations can have consequences material to the financial statements, the auditor may not become aware of the existence of the illegal act unless he is informed by the client, or there is evidence of a governmental agency investigation or enforcement proceeding in the records, documents, or other information normally inspected in an audit of financial statements.

The illegal acts described in the excerpt above may, in particular circumstances, be regarded as having material but indirect effects on financial statements. If specific information comes to the auditor's attention that provides evidence concerning the existence of possible illegal acts that could have a material indirect effect on the financial statements, the auditor should apply audit procedures specifically directed to ascertaining whether an illegal act has occurred. However, because of the characteristics of illegal acts described in the excerpt above, an audit performed in accordance with GAAS provides no assurance that these illegal acts will be detected.

SAS No. 54 provides guidance with respect to various issues, including the following:

- Audit procedures in the absence of evidence concerning possible illegal acts
- Specific information concerning possible illegal acts
- Audit procedures in response to possible illegal acts
- The auditor's response to detected illegal acts, including consideration of the financial statement effect, implications

for the audit, communication with the audit committee, and the effect on the auditor's report

- Circumstances in which the auditor may have a duty to notify parties outside the client

Additionally, auditors may be required, under certain circumstances, pursuant to the Private Securities Litigation Reform Act of 1995 (codified in section 10A(b) 1 of the Securities Exchange Act of 1934) to make a report to the SEC relating to an illegal act that has a material effect on the financial statements.

The Year 2000 Issue

What is the Year 2000 Issue and how does it affect high-technology audit clients and their auditors?

The Year 2000 Issue relates to the inability of many electronic data processing (EDP) systems to accurately process year-date data beyond the year 1999. This is attributable to the fact that the majority of computer programs in use today were designed to store dates in the date/month/year (dd/mm/yy) format, thus allowing only two digits for each date component. So, for example, the date December 31, 1998, is stored in most computers as *12/31/98*. Inherent in programming for dates in this manner is the assumption that the designation *98* refers to the year *1998*. Initially developed as a cost-saving technique, this long-standing practice of using two-digit-year input fields will cause many computers to treat the entry *00* as 1900. Therefore, such programs will recognize the date January 1, 2000 (01/01/00), as January 1, 1900, and process data incorrectly, or perhaps not at all.

There are other possible complications as well. The year 2000 is a leap year. Systems that are not year 2000 ready may not register the additional day, thus producing incorrect results for date-related calculations. In addition, certain year 2000 problems may occur this year. For example, some software programs may have assigned special meanings to entries date coded as *xx/xx/98* or *xx/xx/99* to allow for the testing of software modifications. Therefore, actual transactions using such dates may not be processed correctly or stop functioning. Failures may also take place currently when systems perform calculations into or beyond the year 2000.

Unless these year 2000 problems are remedied, significant problems relating to the integrity of all electronically processed information based on time will occur. For example, since many types of computer programs use dates as part of the program, program results could be affected. Inventory control systems might treat new items as obsolete, receivables may be erroneously classified as past due, computerized equipment maintenance schedules could be affected, and so on. The problem affects not only computers and software, but also such items as electronic devices and equipment with imbedded computer chips that are date sensitive. Any systems that use date information, such as card-entry systems, can be affected.

Even when the entity's computer software and hardware are year 2000 ready, the entity may be affected by the computer systems of distributors, suppliers, customers, third-party data-processing services, and other organizations with which the client interacts, when they have made no such modifications. For example, telecommunication carriers need to be concerned about with how their networks interface with end-user systems, other carriers, and information and enhanced service providers. (See the FCC Web site at http://www.fcc.gov for information on some activities of the telecommunications segment regarding the Year 2000 Issue.)

The significance of these issues to high-technology clients is multi-faceted. Four of the broad ramifications are: (1) if the year 2000 problem is not remedied, it may affect the integrity of systems and information used by the high-technology client; (2) if the year 2000 problem is not remedied, it may affect customers of the high-technology client who have purchased non-year 2000 ready hardware and software products from the client; (3) if not remedied, it could affect the ability of the high-technology company to meet commitments to provide products and services, due to such factors as production or shipping problems; and (4) the year 2000 problem may provide opportunities for high-technology clients to provide solutions to this problem.

Clearly, the Year 2000 Issue has the potential to adversely affect the operations of entities that rely, directly or indirectly, on information technology. What, however, are the auditor's responsibilities for the Year 2000 Issue?

First, it must be understood that it is the responsibility of an entity's management to assess and remediate the effects of the Year 2000 Issue on an entity's systems—not the auditor's. The Year 2000 Issue does not create additional responsibilities for the auditor. Under GAAS, the auditor has a responsibility to plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement, whether caused by error or fraud. Thus, the auditor's responsibility relates to the detection of material misstatement of the financial statements being audited, whether caused by the Year 2000 Issue or by some other cause.

However, auditors should be aware of the many auditing and accounting issues that arise from the Year 2000 Issue, including audit planning and supervision, going-concern issues, and establishing an understanding with the client. A more comprehensive discussion of these issues, including information on new AICPA pronouncements, is included in the publication *Audit Risk Alert—1998/99*. However, some items that may be of particular interest to auditors of high-technology entities are highlighted here.

- Revenue recognition principles for software transactions are set forth in AICPA SOP 97-2, *Software Revenue Recognition*. This SOP provides guidance on the amount and timing of revenue recognition in arrangements that may include the presence of specific factors, including uncertainty of customer acceptance; customer cancellation privileges; and multiple elements, including upgrades and enhancements and postcontract customer support. Entities should be aware that the Year 2000 Issue could affect one or more of these factors and have an unexpected effect on future revenue recognition. See a further discussion titled "Revenue Recognition" in the "Accounting Issues and Developments" portion of this Audit Risk Alert. Among the issues addressed in that section are the applicability of SOP 97-2 (it is also applicable to entities other than traditional software providers) and that SOP 98-4, *Deferral of the Effective Date of a Provision of SOP 97-2, Software Revenue Recognition,* delayed the effective date of a provision of SOP 97-2.

- The Year 2000 Issue may create product warranty and product defect liability and product returns issues for software and hardware vendors. These vendors should consider FASB Statement No. 5, *Accounting for Contingencies,* paragraphs 24 to 26, if there are product warranty or product defect liability issues and FASB Statement No. 48, *Revenue Recognition When Right of Return Exists,* for product return issues.
- Software developers should evaluate arrangements to address the Year 2000 Issue performed for other entities for a fee that are being accounted for under SOP 81-1, *Accounting for Performance of Construction Type and Certain Production Type Contracts.* For any contract expected to result in a loss, the vendor should record a provision for the entire loss in the period in which it becomes evident.
- FASB Statement No. 86, *Accounting for the Costs of Computer Software to Be Sold, Leased, or Otherwise Marketed* (FASB, *Current Text,* vol. 1, sec. Co2), is the authoritative standard on accounting for costs incurred to produce or purchase software that is to be sold, leased, or otherwise marketed. Only certain costs qualify for capitalization under this standard. In accordance with the guidance in the Statement, a write-down or an acceleration of amortization may be necessary if estimated future gross sales are lower than expected because of the Year 2000 Issue.
- Inventories of hardware devices that are not year 2000 ready would be subject to the lower of cost or market test described in ARB No. 43, *Restatement and Revision of Accounting Research Bulletins,* chapter 4, paragraph 8 (FASB, *Current Text,* vol. 1, sec. I78).
- High-technology entities that have sold hardware or software, or provided installation or consulting services, may be at risk for legal action from customers who believe the respon-

sibility for resulting problems lies with the client. The auditor should consider this when performing procedures pursuant to SAS No. 12, *Inquiry of a Client's Lawyer Concerning Litigation, Claims, and Assessments.*

- High-technology clients that are successfully addressing the Year 2000 Issue with products and services, such as hardware, software, consulting, and installation, may see revenue increases in a manner that will not continue into the future. The auditor should be aware that management may be making overly optimistic growth projections that could affect its decisions, such as financing decisions, and these projections may find their way into management's discussion and analysis (MD&A). Two new pronouncements issued this year discuss particular services on management's discussion and analysis. Statement on Standards for Attestation Engagements (SSAE) No. 8, *Management's Discussion and Analysis* (AICPA, *Professional Standards*, vol. 1, AT sec. 700) and SAS No. 86, *Amendment to SAS No. 72, Letters for Underwriters and Certain Other Requesting Parties* (AICPA, *Professional Standards*, vol. 1, AU sec. 634). Further information on these pronouncements is included in the "New Auditing and Attestation Pronouncements" portion of this Audit Risk Alert.

- In addition to the disclosure requirements under the pronouncements previously mentioned, practitioners should be aware of the requirements of SOP 94-6, *Disclosure of Certain Significant Risks and Uncertainties.* Although the need for disclosure by an entity depends on facts and circumstances, disclosure may be required in such areas as impairment or amortization of capitalized software costs, inventory valuation, long-term contract accounting, or litigation, if it is reasonably possible that the amounts reported in the financial statements could change by a material amount within one year from the date of the financial statements. Disclosures also may be required of current vulnerability due to certain concentrations if, for example, a significant vendor has not satisfactorily addressed the Year 2000 Issue.

- Auditors of publicly held companies should consider the guidance set forth by the SEC in its Interpretation titled "Statement of the Commission Regarding Disclosure of Year 2000 Issues and Consequences by Public Companies, Investment Advisers, Investment Companies, and Municipal Securities Issuers," (the Interpretation). The Interpretation supersedes the guidance previously set forth in the revised Staff Legal Bulletin No. 5. The full text of the Interpretation can be viewed on the SEC Web site, http://www.sec.gov.

Auditors should also be aware of the risk of litigation relating to the Year 2000 Issue. Some clients may be uninformed about it, while others may underestimate its magnitude. Those who mistakenly believe that the Year 2000 Issue should be addressed and resolved as part of the audit process may seek legal recourse if that outcome is not achieved. Therefore, auditors may wish to educate their clients on the Year 2000 Issue and its implications and incorporate these issues in the engagement letter by outlining the responsibilities of both the client and the auditor.

A more complete discussion of the implications of the Year 2000 Issue, along with a list of published guidance in this area, can be found in the *Audit Risk Alert—1998/99*. Also the AICPA's Web site, http:\\www.aicpa.org, provides a year 2000 resource page with additional information and links with other sites, and the AICPA publication "The Year 2000 Issue—Current Accounting and Auditing Guidance."[4]

Executive Summary—The Year 2000 Issue

- Unless corrective actions are taken, the Year 2000 Issue may cause accounting and financial information systems to produce inaccurate date-related output.

4. With regard to this publication, the SEC Interpretation on year 2000 issues (referred to above) states that "Although the term 'may' is used throughout the AICPA's guidance, perhaps suggesting that the guidance is discretionary, we believe that the procedures outlined by the AICPA should be considered appropriate practice at this time and we expect companies and their auditors to comply with that guidance. If they do not, they should be prepared to justify why the procedures were not followed."

- Among the issues that may be of particular interest for auditors of high-technology entities are how the Year 2000 Issue can affect software revenue recognition, product warranties and product returns, software development arrangements, accounting for costs of software that is to be sold, leased, or otherwise marketed, inventory valuation, entity growth projection, and potential litigation.
- Auditors should consider client accounting for the Year 2000 Issue pursuant to applicable accounting pronouncements. For publicly held entities, SEC rules and regulations should be considered.
- Additional information on accounting and auditing pronouncements related to the Year 2000 Issue and how the Year 2000 Issue can affect entities and their auditors, can be found in the publication *Audit Risk Alert—1998/99*.

New Auditing and Attestation Pronouncements

What new auditing and attestation pronouncements have been issued this year?

New Auditing Standards

SAS No. 86

SAS No. 86, *Amendment to Statement on Auditing Standards No. 72,* Letters for Underwriters and Certain Other Requesting Parties (AICPA, *Professional Standards,* vol. 1, AU sec. 634) was issued in March 1998 by the ASB to reflect the issuance of SSAE No. 8, *Management's Discussion and Analysis* (AICPA, *Professional Standards,* vol. 1, AT sec. 700). SAS No. 86 allows practitioners that have examined or reviewed MD&A in accordance with the provisions of SSAE No. 8 to state that fact in the introductory section of the comfort letter (a special agreed-upon procedures report that may be issued in connection with a securities offering) and attach a copy of the SSAE No. 8 report to the comfort letter. SAS No. 86 presents examples of comfort letters that contain references to either an examination of annual MD&A or a review of interim MD&A. SAS No. 86 is effective for comfort letters issued on or after June 30, 1998.

SAS No. 87

SAS No. 87, *Restricting the Use of an Auditor's Report* (AICPA, *Professional Standards*, vol. 1, AU sec. 532), was issued in September 1998 by the ASB and is effective for reports issued after December 31, 1998. SAS No. 87 provides guidance to auditors in determining whether an engagement requires a restricted-use report and, if so, what elements to include in that report. The SAS states that an auditor should restrict the use of a report if the following occur.

- The subject matter of the auditor's report or the presentation being reported on is based on measurement or disclosure criteria contained in contractual agreements or regulatory provisions that are not in conformity with GAAP or other comprehensive basis of accounting (OCBOA).
- The accountant's report is based on procedures that are specifically designed and performed to satisfy the needs of specified parties who accept responsibility for the sufficiency of the procedures.
- The auditor's report is issued as a by-product of a financial statement audit and is based on the results of procedures designed to enable the auditor to express an opinion on the financial statements taken as a whole, not to provide assurance on the specific subject matter of the report.

In addition to describing the circumstances in which the use of an auditor's report should be restricted, SAS No. 87, among other things, defines the terms *general use* and *restricted use*, specifies the language to be used in restricted-use reports, and requires an auditor to restrict a single combined report if it covers subject matter or presentations that ordinarily do not require a restriction on use and subject matter or presentations that require such a restriction. It permits auditors to include a separate general-use report in a document that also contains a restricted-use report.

SAS No. 21—Rescinded

SAS No. 21, *Segment Information* (AICPA, *Professional Standards*, vol. 1, AU sec. 435) contained guidance for auditing disclosures made in accordance with the provisions of FASB Statement No. 14, *Financial Reporting for Segments of a Business Enterprise* (FASB, *Current Text*, vol. 1, sec. S20). FASB Statement No. 14 was superseded upon the issuance of FASB Statement No. 131, *Disclosures about Segments of an Enterprise and Related Information* (FASB, *Current Text*, vol. 1, sec. S30), which is effective for fiscal years beginning after December 15, 1997, with earlier application encouraged. Accordingly, the ASB has rescinded SAS No. 21 effective for audits of financial statements to which FASB Statement No. 131 has been applied. In its place, Auditing Interpretation No. 4 of SAS No. 31, *Evidential Matter*, "Applying Auditing Procedures to Segment Disclosures in Financial Statements," has been issued. See the "New Auditing Interpretations" section of *Audit Risk Alert—1998/99* for a more detailed discussion of the new Interpretation.

The following ASB pronouncements became effective during 1998:

- SAS No. 83, *Establishing an Understanding With the Client* (AICPA, *Professional Standards*, vol. 1, AU sec. 310) (effective for engagements for periods ending on or after June 15, 1998)
- SAS No. 84, *Communications Between Predecessor and Successor Auditor* (effective for engagements accepted after March 31, 1998)
- SAS No. 85, *Management Representations* (AICPA, *Professional Standards*, vol. 1, AU sec. 333) (effective for audits of financial statements for periods ending on or after June 30, 1998)
- SSAE No. 7, *Establishing an Understanding With the Client* (AICPA, *Professional Standards*, vol. 1, AT sec. 100) (effective for engagements for periods ending on or after June 15, 1998)

New Attestation Standard

SSAE No. 8

Issued by the ASB in March 1998, SSAE No. 8, *Management's Discussion and Analysis* (AICPA, *Professional Standards*, vol. 1, AT sec. 700), provides guidance to a practitioner on the performance of a review or examination of MD&A prepared pursuant to the rules and regulations of the SEC. The presentation of MD&A in annual reports to shareholders and in other documents constitutes a written assertion upon which an attest engagement may be performed. Specifically, SSAE No. 8 provides the following:

- Conditions for engagement performance for both examinations and reviews of MD&A
- Extensive guidance on planning, performing, and reporting on examinations and reviews of MD&A
- A comparison of activities performed for engagements covered by SAS No. 8, *Other Information in Documents Containing Audited Financial Statements* (AICPA, *Professional Standards*, vol. 1, AU sec. 550), with those performed under SSAE No. 8

SSAE No. 8 became effective upon issuance.

In September 1998, the ASB voted to issue the exposure draft *Amendments to SSAE No. 1, Attestation Standards; SSAE No. 2, Reporting on an Entity's Internal Control Over Financial Reporting; SSAE No. 3, Compliance Attestation* as a final standard. See the "Exposure Draft Issued by the Auditing Standards Board " section of the publication *Audit Risk Alert—1998/99* for further information.

New Auditing Interpretations, a New Attestation Interpretation, and New AITF Advisories

The following is a list of recently issued auditing Interpretations, attest Interpretations, and AITF Advisories. Summaries of the interpretations and advisories can be found in the *Audit Risk Alert—1998/99.*

New Auditing Interpretations

- Interpretation No. 4, "Audit Considerations for the Year 2000 Issue," of AU Section 311, *Planning and Supervision* (AICPA, *Professional Standards*, vol. 1, AU sec. 9311)
- Interpretation No. 1, "The Use of Legal Interpretations as Evidential Matter to Support Management's Assertion That a Transfer of Financial Assets Has Met the Isolation Criterion

in Paragraph 9(a) of Financial Accounting Standards Board Statement No. 125," of SAS No. 73, *Using the Work of a Specialist* (AICPA, *Professional Standards,* vol. 1, AU sec. 9336)

- Interpretation No. 3, "Responsibilities of Service Organizations and Service Auditors With Respect to Information About the Year 2000 Issue in a Service Organization's Description of Controls," of SAS No. 70, *Reports on the Processing of Transactions by Service Organizations* (AICPA, *Professional Standards,* vol. 1, AU sec. 9324)
- Interpretation No. 2, "Effect of the Year 2000 Issue on the Auditor's Consideration of an Entity's Ability to Continue as a Going Concern," of SAS No. 59, *The Auditor's Consideration of an Entity's Ability to Continue as a Going Concern* (AICPA, *Professional Standards,* vol. 1, AU sec. 9341)
- Interpretation No. 4, "Applying Auditing Procedures to Segment Disclosures in Financial Statements," of SAS No. 31, *Evidential Matter* (AICPA, *Professional Standards,* vol. 1, AU sec. 9326)
- Interpretation No. 3, "Commenting in a Comfort Letter on Quantitative and Qualitative Disclosures About Market Risk Made in Accordance With Item 305 of Regulation S-K," of SAS No. 72, *Letters for Underwriters and Certain Other Requesting Parties* (AICPA, *Professional Standards,* vol. 1, AU sec. 9634)

New Attestation Interpretation

Interpretation No. 1, "Consideration of the Year 2000 Issue When Examining or Reviewing Management's Discussion and Analysis," of SSAE No. 8, *Management's Discussion and Analysis*

New Audit Issues Task Force Advisories[5]

- AITF Advisory Concerning Comprehensive Income

5. From time to time the AITF issues AITF Advisories to provide nonauthoritative guidance on current developments or recently issued authoritative literature.

- AITF Advisory Concerning Practice Issues Regarding Language to Permit the Use of Legal Opinions by Auditors (Note that this Advisory was an intermediary document. It was replaced by the amended Interpretation to SAS No 73, included in the preceding list under the heading "New Auditing Interpretations.")

A list of the Statements of Position issued this year are included in the section titled "New AICPA Accounting and Auditing Statements of Position" in this Audit Risk Alert.

Accounting Issues and Developments

Revenue Recognition

What significant factors should the auditor consider with respect to revenue recognition for high-technology audit clients?

One significant factor that complicates revenue recognition in the high-technology industry is that there are many individualized agreements, often with unusual or complex terms. Because a type of technology can often be used in many ways in different types of products without incurring significant additional costs, a vendor may fashion individual products and services for different clients. They can provide for extended payment terms, the right to receive future products or services, cancellation options, rights of returns, rights of exchange, acceptance clauses, free services, price protection, and so forth. In addition, even the standard sales contract may have features that make revenue recognition less than straightforward, such as requiring substantial continuing vendor involvement after delivery of merchandise (for example, software or hardware sales requiring installation, debugging, extensive modifications, or other significant support commitments). These types of issues make the determination of proper revenue recognition more difficult in the high-technology industry than in many other industries.

Additionally, the issue of improper revenue recognition has been reported in the media lately. A discussion of this issue is included in the section titled "Improper Revenue Recognition" in the "Current

Audit Issues" portion of the publication *Audit Risk Alert—1998/99.* The AICPA staff, with the oversight of AICPA technical committees, is preparing a nonauthoritative "toolkit" to help financial statement preparers and auditors better understand issues surrounding revenue recognition, and the AICPA SEC Practice Section Professional Issues Task Force is preparing a Practice Alert, *Revenue Recognition Issues.* These two publications will be available on the AICPA Web site by the end of 1998.

In dealing with complex revenue recognition questions that are not directly addressed in the accounting literature, it may be useful to understand the principles set forth in the FASB's Statements of Financial Accounting Concepts. For example, Concept Statement No. 5, *Recognition and Measurement in Financial Statements of Business Enterprises,* includes a list of fundamental recognition criteria. Guidance of a more specific nature may be found in FASB and AICPA accounting pronouncements, such as those discussed in the following sections, and, for SEC registrants, literature such as the SEC's Accounting and Auditing Enforcement Releases (for example, Release No. 108, which addresses bill and hold situations). Some accounting pronouncements that may be of significance to high-technology audit clients are discussed below.

SOP 97-2, *Software Revenue Recognition* (See the next two headings for sections on SOP 98-4, regarding deferral of a provision of 97-2, and on an exposure draft addressing this issue.)

In October 1997, the Accounting Standards Executive Committee (AcSEC), issued SOP 97-2, *Software Revenue Recognition.* This SOP provides guidance on applying generally accepted accounting principles in recognizing revenue on software transactions. This SOP supersedes SOP 91-1, *Software Revenue Recognition.* This SOP requires the following:

- If an arrangement to deliver software or a software system does not require significant production, modification, or customization of software, revenue should be recognized when all of the following criteria are met.
  - Persuasive evidence of an arrangement exists.
  - Delivery has occurred.

- The vendor's fee is fixed or determinable.
- Collectibility is probable.

- Software arrangements may consist of multiple elements, that is, additional software products, upgrades/enhancements, postcontract customer support (PCS), or services, including elements deliverable only on a when-and-if-available basis. If contract accounting does not apply, the vendor's fee must be allocated to the various elements based on vendor-specific objective evidence of fair values. If sufficient vendor-specific objective evidence of fair values does not exist, all revenue from the arrangement should be deferred until such sufficient evidence exists, or until all elements have been delivered. Exceptions to this guidance are provided for PCS, services that do not involve significant customization, subscriptions, and arrangements in which the fee is based on the number of copies.
- Vendor-specific objective evidence of fair value is limited to (*a*) the price charged when the element is sold separately, or (*b*) if the element is not yet being sold separately, the price for each element established by management having the relevant authority.
- The portion of the fee allocated to an element should be recognized as revenue when all of the revenue recognition criteria have been met. In applying those criteria, the delivery of an element is considered not to have occurred if there are undelivered elements that are essential to the functionality of any delivered elements. Additionally, the collectibility of that portion of the fee is not considered probable if the amount of the fees allocable to delivered elements is subject to forfeiture, refund, or other concession if the undelivered elements are not delivered.
- Separate accounting for a service element of an arrangement is required if both of the following criteria are met.
  - The services are not essential to the functionality of any other element of the transaction.

  - The services are described in the contract such that the total price of the arrangement would be expected to vary as the result of inclusion or exclusion of the services.

- If an arrangement to deliver software or a software system, either alone or together with other products or services, requires significant production, modification, or customization of software, the entire arrangement should be accounted for in conformity with Accounting Research Bulletin (ARB) No. 45, *Long-Term Construction-Type Contracts*, using the relevant guidance in SOP 81-1, *Accounting for Performance of Construction-Type and Certain Production-Type Contracts*, unless criteria specified in SOP 97-2 for separate accounting for any service element are met.

This SOP is effective for transactions entered into in fiscal years beginning after December 15, 1997. Earlier application is encouraged as of the beginning of fiscal years or interim periods for which financial statements or information have not been issued. Retroactive application of the provisions of this SOP is prohibited.

Auditors should be aware this SOP is applicable to entities other than traditional software companies. The "Scope" section of the SOP provides, in part—

> This SOP provides guidance on when revenue should be recognized and in what amounts for **licensing** [defined in the glossary], selling, leasing, or otherwise marketing computer software. It should be applied to those activities by all entities that earn such revenue. It does not apply, however, to revenue earned on products or services containing software that is incidental[2] to the products or services as a whole.
>
> 2. Indicators of whether software is incidental to a product as a whole include (but are not limited to) (*a*) whether the software is a significant focus of the marketing effort or is sold separately, (*b*) whether the vendor is providing postcontract customer support, and (*c*) whether the vendor incurs significant costs that are within the scope of FASB Statement No. 86, *Accounting for the Costs of Computer Software to Be Sold, Leased, or Otherwise Marketed.* An example of the applicability of this SOP to revenue earned on products containing software is included in appendix A, "Examples of the Application of Certain Provisions of This Statement of Position."

SOP 98-4, *Deferral of the Effective Date of a Provision of SOP 97-2, Software Revenue Recognition* (See the next section regarding an exposure draft addressing this issue.)

In March 1998, AcSEC issued SOP 98-4, *Deferral of the Effective Date of a Provision of SOP 97-2, Software Revenue Recognition.* This SOP defers for one year the application of the following passages in SOP 97-2, which limit what is considered vendor-specific objective evidence of the fair value of the various elements in a multiple-element arrangement:

1. The second sentences of paragraphs 10, 37, 41, and 57
2. Example 3 in "Multiple-Element Arrangements—Products" on page 67 (appendix A)
3. Example 3 in "Multiple-Element Arrangement—Products and Services" on page 70 (appendix A)

All other provisions of SOP 97-2 remain in effect.

This SOP applies to all multiple-element software arrangements, as defined in paragraph 9 of SOP 97-2, and is effective as of March 31, 1998. If an enterprise had applied SOP 97-2 in an earlier period for financial statements or information already issued prior to the promulgation of this SOP, amounts reported in those financial statements or as part of that information may be restated.

Exposure Draft of a Proposed SOP, "Modification of the Limitations on Evidence of Fair Value in Software Arrangements"

In July 1998, AcSEC issued an exposure draft of a proposed SOP, *Modification of the Limitations on Evidence of Fair Value in Software Arrangements.* This exposure draft proposed rescinding the second sentences of paragraphs 10, 37, 41, and 57 of SOP 97-2, *Software Revenue Recognition,* which limit what is considered vendor-specific objective evidence of fair value of the various elements in a multiple-element arrangement. It also proposed amending certain examples in SOP 97-2 that are affected by the rescinded sentences and adding an additional example. Comments on the exposure draft were due by September 30, 1998.

After considering the comment letters on the exposure draft, AcSEC decided not to rescind the second sentences of paragraphs 10, 37, 41, and 57 of SOP 97-2, as had been proposed. Instead, AcSEC approved, *subject to FASB clearance,* issuance of an SOP that would amend SOP 97-2 to provide for revenue recognition under the "residual" method when (a) there is vendor-specific objective evidence of the fair value of *all* undelivered elements in a multiple-element arrangement that is not accounted for using long-term contract accounting, (b) vendor-specific objective evidence does not exist for one or more of the delivered elements in the arrangement, and (c) all revenue recognition criteria in SOP 97-2 other than the requirement for vendor-specific objective evidence of the fair value of each element are satisfied.

Under the residual method, the arrangement fee is recognized as follows: (a) the total fair value of the undelivered elements is deferred and subsequently recognized in accordance with the relevant sections of SOP 97-2, and (b) the difference between the total arrangement fee and the amount deferred for the undelivered elements is recognized as revenue related to the delivered elements.

The proposed SOP would be effective for transactions entered into in fiscal years beginning after March 15, 1999, with earlier adoption permitted as of the beginning of fiscal years or interim periods for which financial statements or information have not been issued. Retroactive application of the SOP would be prohibited.

Auditors should consult the final SOP to determine the final provisions of this pronouncement.

FASB Statement No. 48, Revenue Recognition When Right of Return Exists

As with most entities that sell products, customers of these entities often have certain return rights. FASB Statement No. 48, *Revenue Recognition When Right of Return Exists* (FASB, Current Text, vol. 1, sec. R75), specifies criteria for recognizing revenue on a sale in which a product may be returned, whether as a matter of contract or as a matter of existing practice, either by the ultimate customer or by a party who resells the product to others. FASB Statement No. 48 provides that revenue from such sales transactions shall be recognized at the time of sale only if all the following conditions are met:

1. The seller's price to the buyer is substantially fixed or determinable at the date of sale.
2. The buyer has paid the seller, or the buyer is obligated to pay the seller and the obligation is not contingent on resale of the product.
3. The buyer's obligation to the seller would not be changed in the event of theft or physical destruction or damage of the product.
4. The buyer acquiring the product for resale has economic substance apart from that provided by the seller.[6]
5. The seller does not have significant obligations for future performance to directly bring about resale of the product by the buyer.
6. The amount of future returns[7] can be reasonably estimated.

If these conditions are not met, revenue recognition is postponed; if they are met, sales revenue and cost of sales reported in the income statement must be reduced to reflect estimated returns, and expected costs or losses must be accrued.

The ability to make a reasonable estimate of the amount of future returns as specified in item 6 above depends on many factors and circumstances that vary from one case to the next. FASB Statement No. 48 outlines examples of factors that may impair the ability to make a reasonable estimate, such as the following:

- Technological obsolescence or changes in demand
- Relatively long periods in which a product may be returned

6. This condition relates primarily to buyers that exist "on paper," that is, buyers that have little or no physical facilities or employees. It prevents enterprises from recognizing sales revenue on transactions with parties that the sellers have established primarily for the purpose of recognizing such sales revenue.

7. Exchanges by ultimate customers of one item for another of the same kind, quality, and price (for example, one color or size for another) are not considered returns for the purposes of FASB Statement No. 48.

- The absence of historical experience with similar type of sales of similar products
- The absence of a large volume of relatively homogeneous transactions

In circumstances where the right of return exists, the auditor should assess the client's application of FASB Statement No. 48 by referring to the full text of the statement.

Additionally, paragraphs 35 through 55 of SOP 97-2 provide additional guidance regarding the application of FASB Statement No. 48 to sales of software.

For publicly held entities, the activity in the allowance for sales returns and allowances should be disclosed consistent with the requirements of Article 5.04 (c), Schedule II of Regulation S-X.

FASB Technical Bulletin No. 90-1, Accounting for Separately Priced Extended Warranty and Product Maintenance Contracts

The high-technology entity may also have revenue from the sale of separately priced extended warranty and product maintenance contracts to customers. Auditors should distinguish between separately priced extended warranty and product maintenance contracts covered under FASB Technical Bulletin No. 90-1, *Accounting for Separately Priced Extended Warranty and Product Maintenance Contracts* (FASB, Current Text, vol. 1., sec. R75) and postcontract customer support (PCS) covered under SOP 97-2, *Software Revenue Recognition.* A typical PCS arrangement might include services such as telephone support and correction of errors (bug fixing or debugging). FASB Technical Bulletin No. 90-1 addresses how revenue and costs from a separately priced extended warranty or product maintenance contract should be recognized. The bulletin provides the following:

1. Revenue from separately priced extended warranty and product maintenance contracts should be deferred and recognized in income on a straight-line basis over the contract period except in those circumstances in which sufficient historical evidence indicates that the costs of performing

services under the contract are incurred on other than a straight-line basis. In those circumstances, revenue should be recognized over the contract period in proportion to the costs expected to be incurred in performing services under the contract.

2. Costs that are directly related to the acquisition of a contract and that would have not been incurred but for the acquisition of that contract (incremental direct acquisition costs) should be deferred and charged to expense in proportion to the revenue recognized. All other costs, such as costs of services performed under the contract, general and administrative expenses, advertising expenses, and costs associated with the negotiation of a contract that is not consummated, should be charged to expense as incurred.

3. A loss should be recognized on extended warranty or product maintenance contracts if the sum of expected costs of providing services under the contracts and unamortized acquisition costs exceeds related unearned revenue. Extended warranty or product maintenance contracts should be grouped in a consistent manner to determine if a loss exists. A loss should be recognized first by charging any unamortized acquisition costs to expense. If the loss is greater than the unamortized acquisition costs, a liability should be recognized for the excess.

Executive Summary—Revenue Recognition

- Recognition of revenue for high-technology clients is generally a more complex issue than it is in many industries due to such factors as the high number of contracts with customized terms.
- As the high-technology industry continues to evolve, new types of client arrangements may be seen and need to be evaluated as to the proper timing of revenue recognition.
- Auditors need to have a sound understanding of the underlying theories of revenue recognition and the specific pronouncements that may apply.

Software Developed or Obtained for Internal Use

What recent guidance has been issued with respect to accounting for the costs of internal use computer software?

High-technology clients may have extensive computer systems that they use for internal management; for example, a telecommunications client may have a sophisticated system for tracking and billing customer usage. Having the most up-to-date systems can give high-technology audit clients a competitive edge in products, customer service, and so forth. A recent pronouncement addressed the issue of internal use computer software.

In March 1998, AcSEC issued SOP 98-1, *Accounting for the Costs of Computer Software Developed or Obtained for Internal Use.* This SOP provides guidance on accounting for the costs of computer software developed or obtained for internal use. It requires the following.

- Computer software costs that are incurred in the preliminary project stage should be expensed as incurred. Once the capitalization criteria of the SOP have been met, external direct costs of materials and services consumed in developing or obtaining internal-use computer software; payroll and payroll-related costs for employees who are directly associated with and who devote time to the internal-use computer software project (to the extent of the time spent directly on the project); and interest costs incurred when developing computer software for internal use should be capitalized. Training costs and many kinds of data conversion costs should be expensed as incurred.

- Internal costs incurred for upgrades and enhancements that add functionality should be expensed or capitalized using the same criteria as for new software. Internal costs incurred for maintenance should be expensed as incurred. Entities that cannot separate internal costs on a reasonably cost-effective basis between maintenance and relatively minor upgrades and enhancements should expense such costs as incurred.

- External costs incurred under agreements related to specified upgrades and enhancements should be expensed or capitalized using the same criteria as for new software. However, external costs related to maintenance, unspecified upgrades and enhancements, and costs under agreements that combine the costs of maintenance and unspecified upgrades and enhancements should be recognized in expense over the contract period on a straight-line basis unless another systematic and rational basis is more representative of the services received.

- Impairment should be recognized and measured in accordance with the provisions of FASB Statement No. 121, *Accounting for the Impairment of Long-Lived Assets and for Long-Lived Assets to Be Disposed Of.*

- The capitalized costs of computer software developed or obtained for internal use should be amortized on a straight-line basis unless another systematic and rational basis is more representative of the software's use.

- If, after the development of internal-use software is completed, an entity decides to market the software, proceeds received from the license of the computer software, net of direct incremental costs of marketing, should be applied against the carrying amount of that software.

SOP 98-1 identifies the characteristics of internal-use software and provides examples to assist in determining when computer software is for internal use. The SOP applies to all nongovernmental entities and is effective for financial statements for fiscal years beginning after December 15, 1998. It should be applied to internal-use software costs incurred in those fiscal years for all projects, including those projects in progress upon initial application of the SOP. Earlier application is encouraged in fiscal years for which annual financial statements have not been issued. Costs incurred prior to initial application of this SOP, whether capitalized or not, should not be adjusted to the amounts that would have been capitalized had this SOP been in effect when those costs were incurred.

In addition, EITF Issue No. 97-13, *Accounting for Costs Incurred in Connection with a Consulting Contract or an Internal Project That Combines Business Process Reengineering and Information Technology Transformation,* provides relevant guidance when an entity's information technology transformation project involves business process reengineering.

Costs of Computer Software to Be Sold, Leased, or Otherwise Marketed

What guidance is available regarding accounting for the costs of computer software to be sold, leased, or otherwise marketed?

FASB Statement No. 86, *Accounting for the Costs of Computer Software to be Sold, Leased, or Otherwise Marketed* (FASB, *Current Text,* vol. 2, sec. Co2) specifies the accounting for the costs of computer software to be sold, leased, or otherwise marketed as a separate product or as part of a product or process. It applies to computer software developed internally and to purchased software.

Costs incurred internally in creating a computer software product shall be charged to expense when incurred as research and development until technological feasibility has been established for the product. Technological feasibility is established upon completion of a detail program design or, in its absence, completion of a working model. Thereafter, all software production costs shall be capitalized and subsequently reported at the lower of unamortized cost or net realizable value. Capitalized costs are amortized based on current and future revenue for each product with an annual minimum equal to the straight-line amortization over the remaining estimated economic life of the product.

EITF Issue No. 96-6, *Accounting for the Film and Software Costs Associated with Developing Entertainment and Educational Software Products,* raises the issues of how entities should account for the film and software costs associated with developing entertainment and educational products. However, because of the position taken by SEC staff, the task force was not asked to reach a consensus on this Issue. The SEC's position is included in the EITF Abstracts.

In-Process Research and Development in a Purchase Business Combination

What are the current significant issues with respect to in-process research and development in a purchase business combination?

A current significant issue in the high-technology industry is that in a number of business combinations, a significant amount of the purchase price was allocated to in-process research and development (IPR&D) and then written off. There has been much discussion in the press about this issue, and the SEC staff has expressed concern, also.

The applicable literature here is APB Opinion 16, *Business Combinations* and related pronouncements (FASB, *Current Text*, vol. 1, sec. B50). Paragraphs B50.151 and B50.152 provide the following guidance for a purchase business combinations:

> .151 Costs shall be assigned to all identifiable tangible and intangible assets, including any *resulting from* research and development activities of the acquired enterprise or *to be used in* research and development activities of the combined enterprise. Identifiable assets *resulting from* research and development activities of the acquired enterprise might include, for example, patents received or applied for, blueprints, formulas, and specifications or designs for new products or processes. Identifiable assets *to be used in* research and development activities of the combined enterprise might include, for example, materials and supplies, equipment and facilities, and perhaps even a specific research project in process. In either case, the costs to be assigned are determined from the amount paid by the acquiring enterprise and *not* from the original cost to the acquired enterprise. [FIN4, ¶4]
>
> .152 The subsequent accounting by the combined enterprise for the costs allocated to assets *to be used in* research and development activities shall be determined by reference to Section R50, "Research and Development." Accordingly, costs assigned to assets to be used in a particular research and development project and that have no alternative future use (refer to Section R50, paragraph .107) shall be charged to expense at the date of consummation of the combination. [FIN4, ¶5] [Refer to paragraph .1001 for an EITF Issue that provides interpretive guidance on this paragraph.]

The issue that has come up recently is how the purchase price has been allocated to the assets purchased, in particular, to IPR&D. Auditors of SEC registrants should be aware that the staff of the SEC have noted a number of problems regarding the valuation of IPR&D. One area noted frequently was the treatment of attributes of capitalized assets as attributes of IPR&D, for example, considering as IPR&D that portion of the purchased rights to technology that represents the future value of the right to enhance a product that has already been completed, on the theory that the right will be used in research and development. Other problems noted by the SEC staff include the definition of fair value and valuations that use a "relief from royalty" approach using average industry royalty rates.

Many of these valuations are based on the work of a specialist, such as an appraiser. In these circumstances, auditors should follow the applicable guidance in SAS No. 73, *Using the Work of a Specialist,* and understand their responsibilities under that standard.

New FASB Pronouncements

What new accounting pronouncements have been issued this year by the FASB?

FASB Statement No. 132

In February 1998, the FASB issued Statement No. 132, *Employers' Disclosures about Pensions and Other Postretirement Benefits, an amendment of FASB Statements No. 87, 88, and 106* (FASB, *Current Text,* vol. 1, secs. P16, P40). FASB Statement No. 132 revises employers' disclosures about pension and other postretirement benefit plans. It does not change the measurement or recognition of those plans. It standardizes the disclosure requirements for pensions and other postretirement benefits to the extent practicable, requires additional information on changes in the benefit obligations and fair values of plan assets that will facilitate financial analysis, and eliminates certain disclosures that are no longer as useful as they were when FASB Statement Nos. 87, *Employers' Accounting for Pensions* (FASB, *Current Text,* vol. 1, sec. P16), 88, *Employers' Accounting for Settlements and Curtailments of Defined*

Benefit Pension Plans and for Termination Benefits (FASB, *Current Text,* vol. 1, sec. P16), and 106, *Employers' Accounting for Postretirement Benefits Other Than Pensions* (FASB, *Current Text,* vol. 1, sec. P40), were issued. FASB Statement No. 132 suggests combined formats for presentation of pension and other postretirement benefit disclosures. It also permits reduced disclosures for nonpublic entities.

FASB Statement No. 132 is effective for fiscal years beginning after December 15, 1997. Earlier application is encouraged. Restatement of disclosures for earlier periods provided for comparative purposes is required unless the information is not readily available, in which case the notes to the financial statements should include all available information and a description of the information not available.

FASB Statement No. 133

In June 1998, the FASB issued FASB Statement No. 133, *Accounting for Derivative Instruments and Hedging Activities* (FASB, *Current Text,* vol. 1, sec. D50). FASB Statement No. 133 establishes accounting and reporting standards for derivative instruments, including certain derivative instruments embedded in other contracts (collectively referred to as derivatives), and for hedging activities. It requires that an entity recognize all derivatives as either assets or liabilities in the statement of financial position and measure those instruments at fair value. If certain conditions are met, a derivative may be specifically designated as (1) a hedge of the exposure to changes in the fair value of a recognized asset or liability or an unrecognized firm commitment, (2) a hedge of the exposure to variable cash flows of a forecasted transaction, or (3) a hedge of the foreign currency exposure of a net investment in a foreign operation, an unrecognized firm commitment, an available-for-sale security, or a foreign-currency-denominated forecasted transaction.

The accounting for changes in the fair value of a derivative (that is, gains and losses) depends on the intended use of the derivative and the resulting designation.

For a derivative designated as hedging the exposure to changes in the fair value of a recognized asset or liability or a firm commitment (referred to as a *fair value hedge*), the gain or loss is recognized in earnings in the period of change together with the offsetting loss or gain on the hedged item attributable to the risk being hedged. The effect of that accounting is to reflect in earnings the extent to which the hedge is not effective in achieving offsetting changes in fair value.

For a derivative designated as hedging the exposure to variable cash flows of a forecasted transaction (referred to as a *cash flow hedge*), the effective portion of the derivative's gain or loss is initially reported as a component of other comprehensive income (outside earnings) and subsequently reclassified into earnings when the forecasted transaction affects earnings. The ineffective portion of the gain or loss is reported in earnings immediately.

For a derivative designated as hedging the foreign currency exposure of a net investment in a foreign operation, the gain or loss is reported in other comprehensive income (outside earnings) as part of the cumulative translation adjustment. The accounting for a fair value hedge described above applies to a derivative designated as a hedge of the foreign currency exposure of an unrecognized firm commitment or an available-for-sale security. Similarly, the accounting for a cash flow hedge described above applies to a derivative designated as a hedge of the foreign currency exposure of a foreign-currency-denominated forecasted transaction.

For a derivative not designated as a hedging instrument, the gain or loss is recognized in earnings in the period of change.

Under FASB Statement No. 133, an entity that elects to apply hedge accounting is required to establish, at the inception of the hedge, the method it will use for assessing the effectiveness of the hedging derivative and the measurement approach for determining the ineffective aspect of the hedge. Those methods must be consistent with the entity's approach to managing risk.

FASB Statement No. 133 applies to all entities. A not-for-profit organization should recognize the change in fair value of all derivatives as a change in net assets in the period of change. In a fair value hedge, the changes in the fair value of the hedged item attributable to the risk being hedged also are recognized. However, because of the format of their statement of financial performance, not-for-profit organizations are not permitted special hedge accounting for derivatives used to hedge forecasted transactions. FASB Statement No. 133 does not address how a not-for-profit organization should determine the components of an operating measure if one is presented.

FASB Statement No. 133 precludes designating a nonderivative financial instrument as a hedge of an asset, liability, unrecognized firm commitment, or forecasted transaction except that a nonderivative instrument denominated in a foreign currency may be designated as a hedge of the foreign currency exposure of an unrecognized firm commitment denominated in a foreign currency or a net investment in a foreign operation.

FASB Statement No. 133 amends FASB Statement No. 52, *Foreign Currency Translation* (FASB, *Current Text*, vol. 1, sec. F60), to permit special accounting for a hedge of a foreign currency forecasted transaction with a derivative. It supersedes FASB Statement Nos. 80, *Accounting for Futures Contracts* (FASB, *Current Text*, vol. 1, sec. F80), 105, *Disclosure of Information about Financial Instruments with Off-Balance-Sheet Risk and Financial Instruments with Concentrations of Credit Risk* (FASB, *Current Text*, vol. 1, sec. F25), and 119, *Disclosure about Derivative Financial Instruments and Fair Value of Financial Instruments* (FASB, *Current Text*, vol. 1, sec. F25). It amends FASB Statement No. 107, *Disclosures about Fair Value of Financial Instruments* (FASB, *Current Text*, vol. 1, sec. F25), to include in FASB Statement No. 107 the disclosure provisions about concentrations of credit risk from FASB Statement No. 105. FASB Statement No. 133 also nullifies or modifies the consensuses reached in a number of issues addressed by the EITF.

FASB Statement No. 133 is effective for all fiscal quarters of fiscal years beginning after June 15, 1999. Initial application of this Statement should be as of the beginning of an entity's fiscal quarter; on that date, hedging relationships must be designated anew and documented pursuant to the provisions of this Statement. Earlier application of all of the provisions of this Statement is encouraged, but it is permitted only as of the beginning of any fiscal quarter that begins after issuance of this Statement. This Statement should not be applied retroactively to financial statements of prior periods.

FASB Statement No. 134

In October 1998, the FASB issued FASB No. 134, *Accounting for Mortgaged-Backed Securities Retained after the Securitization of Mortgage Loans Held for Sale by a Mortgage Banking Enterprise, an amendment of FASB Statement No. 65.*

FASB Technical Bulletin No. 97-1

FASB Technical Bulletin No. 97-1, *Accounting Under Statement 123 for Certain Employee Stock Purchase Plans with a Look-Back Option,* provides guidance on accounting for certain employee stock purchase plans under FASB Statement No. 123, *Accounting for Stock-Based Compensation* (FASB, *Current Text,* vol. 1, sec. C36). The bulletin does not address the accounting for those plans under APB Opinion 25, *Accounting for Stock Issued to Employees* (FASB, *Current Text,* vol. 1, sec. C47). The Bulletin applies to stock-based awards granted, renewed, or modified on or after January 1, 1998.

EITF Consensus Positions

The status of issues considered recently by the EITF of the FASB can be found in the *Audit Risk Alert—1998/99.*

Executive Summary—New FASB Pronouncements

- FASB Statement No. 132, *Employers' Disclosures about Pensions and Other Postretirement Benefits, an amendment of FASB Statement Nos. 87, 88, and 106*
- FASB Statement No. 133, *Accounting for Derivative Instruments and Hedging Activities*
- FASB Statement No. 134, *Accounting for Mortgage-Backed Securities Retained after the Securitization of Mortgage Loans Held for Sale by a Mortgage Banking Enterprise, an amendment of FASB Statement No. 65* (issued October 1998).

- FASB Technical Bulletin No. 97-1, *Accounting Under Statement 123 for Certain Employee Stock Purchase Plans with a Look-Back Option*
- The status of issues considered recently by the EITF of the FASB can be found in the *Audit Risk Alert—1998/99.*

New AICPA Accounting and Auditing Statements of Position

What new AICPA accounting and auditing SOPs have been issued this year?

Among those SOPs issued recently are three that were discussed previously in this Audit Risk Alert:

- SOP 97-2, *Software Revenue Recognition*
- SOP 98-1, *Accounting for the Costs of Computer Software Developed or Obtained for Internal Use*
- SOP 98-4, *Deferral of the Effective Date of a Provision of SOP 97-2, Software Revenue Recognition*

Additionally, the following SOPs were also issued (discussed in *Audit Risk Alert—1998/99*):

- SOP 97-3, *Accounting by Insurance and Other Enterprises for Insurance-Related Assessments*
- SOP 98-2, *Accounting for Costs of Activities of Not-for-Profit Organizations and State and Local Governmental Entities That Include Fund Raising*
- SOP 98-3, *Audits of States, Local Governments, and Not-for-Profit Organizations Receiving Federal Awards*
- SOP 98-5, *Reporting on the Costs of Start-Up Activities*
- SOP 98-6, *Reporting on Management's Assessment Pursuant to the Life Insurance Ethical Market Conduct Program of the Insurance Marketplace Standards Association*
- SOP 98-7, *Deposit Accounting: Accounting for Insurance and Reinsurance Contracts That Do Not Transfer Insurance Risk*
- SOP 98-8, *Engagements to Perform Year 2000 Agreed-Upon Procedures Attestation Engagements Pursuant to—Rule 17a–5*

of the Securities Exchange Act of 1934, Rule 17Ad-18 of the Securities Exchange Act of 1934, and Advisories No.17–98 and No. 42-98 of the Commodity Futures Trading Commission. This SOP has been posted in its entirety on the AICPA Web site, http://www.aicpa.org.

The Internet—An Auditor's Research Tool

Can auditors use the Internet to perform more efficient audits?

If used properly, the Internet can be a valuable tool for auditors. Through the Internet, auditors can access a wide variety of global business information. For example, information is available relating to SEC filings, professional news, state CPA society information, Internal Revenue Service information, software downloads, university research materials, currency exchange rates, stock prices, annual reports, and legislative and regulatory initiatives. Not only are such materials accessible from the computer, but they are available at any time, free of charge.

A number of resources provide direct information, whereas others may simply point to information inside and outside of the Internet. Auditors can use the Internet to—

- Obtain audit and accounting research information.
- Obtain texts such as audit programs.
- Discuss audit issue with peers.
- Communicate with audit clients.
- Obtain information from a client's Web site.
- Obtain information on professional associations.

There are caveats to keep in mind when using the Internet. Reliability varies considerably. Some information on the Internet has not been reviewed or checked for accuracy; caution is advised when accessing data from unknown or questionable sources. Although a vast amount of information is available on the Internet, much of it may be of little or no value to auditors. Accordingly, auditors should learn to use search engines effectively to minimize the amount of time browsing through useless information. The Internet is best used in tandem with other research tools, because it is unlikely that all desired research can be conducted solely from Internet sources.

Some Web sites that may provide valuable information to auditors are listed in the following table. Additional Web sites are shown on in the table titled "Information Sources," at the end of this Audit Risk Alert.

Name of Site	*Content*	*Internet Address*
Accountant's Home Page	Resources for accountants and financial and business professionals	http://www.computercpa.com/
AuditNet	Electronic communications among audit professionals	http://www.cowan.edu.au/mra/home.htm
CPAnet	Links to other Web sites of interest to CPAs	http://www.cpalinks.com/
Cybersolve	Online financial calculators, such as ratio and breakeven analysis	http://www.cybersolve.com/tools1.html
Double Entries	A weekly newsletter on accounting and auditing around the world	http://www.csu.edu.au/lists.anet/ADBLE-L/index.html
The Electronic Accountant	World Wide Web magazine that features up-to-the minute news for accountants	http://www.electronicaccountant.com
FedWorld.Gov	U.S. Department of Commerce sponsored site providing access to government publications	http://www.fedworld.com
Financial Systems Forum	Topics involving the improvement of financial systems by providing information on methodologies, service organizations, and vendors with a focus on applications concerning accounts payable, accounts receivable, asset management, general ledger, and inventory	http://www.fsforum.com
General Accounting Office	Policy and guidance materials, reports on federal agency major rules	http://www.gao.gov
Guide to WWW for Research and Auditing	Basic instructions on how to use the Web as an auditing research tool	http://www.tetranet.net/users/gaostl/guide.htm
Hoovers Online	Online information on various companies and industries	http://www.hoovers.com
Internet Bulletin for CPAs	CPA tool for Internet sites, discussion groups, and other resources for CPAs	http://www.kentis.com/ib.html

Name of Site	Content	Internet Address
U.S. Tax Code Online	A complete text of the U.S. Tax Code	http://www.fourmilab.ch/ustax/ustax.html
Vision Project	Information on the profession's vision project	http://www.cpavision.org/horizon

References for Additional Guidance

Further information on matters addressed herein is available through various publications and services listed in the table titled "Information Sources," at the back of this Audit Risk Alert. Many nongovernment and some government publications and services involve a charge or membership requirement.

Fax services allow users to follow voice cues and request that selected documents be sent by fax machine. Some fax services require the user to call from the handset of the fax machine; others allow users to call from any telephone. Most fax services offer an index document, which lists titles and other information describing available documents.

Electronic bulletin board services allow users to read, copy, and exchange information electronically. Most are available using a modem and standard communications software. Some bulletin board services are also available using one or more Internet protocols.

Recorded announcements allow users to listen to announcements about a variety of recent or scheduled actions or meetings.

All telephone numbers listed are voice lines, unless otherwise designated as fax (f) or data (d) lines. Required modem speeds, expressed in bauds per second (bps), are listed data lines.

This Audit Risk Alert replaces *High-Technology Industry Developments—1997/98*. The *High-Technology Industry Developments* Audit Risk Alert is published annually. As you encounter audit or industry issues that you believe warrant discussion in next year's Alert, please feel free to share them with us. Any other comments that you have about the Alert would also be greatly appreciated. You may email these comments to sfrohlich@aicpa.org or write to:

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Practitioners should also be aware of the economic, regulatory, and professional developments described in *Audit Risk Alert—1998/99* (Product No. 022223) and *Compilation and Review Alert—1998/99* (Product No. 022222), which may be obtained by calling the AICPA Order Department at 1-888-777-7077.

INFORMATION SOURCES

Organization	*General Information*	*Fax Service*	*Internet*	*Recorded Announcements*
American Institute of Certified Public Accountants	*Order Department* Harborside Financial Center, 201 Plaza Three Jersey City, NJ 07311-3881 (888) 777-7077	*24 Hour Fax Hotline* (201) 938-3787	http://www.aicpa.org	
Financial Accounting Standards Board	*Order Department* P.O. Box 5116 Norwalk, CT 06856-5116 (203) 847-0700, ext. 10		http://www.fasb.org	*Action Alert Telephone Line* (203) 847-0700, ext. 444
United States Securities and Exchange Commission	*Publications Unit* 450 Fifth Street, NW Washington, DC 20549-0001 (202) 942-4040 *SEC Public Reference Room* (202) 942-8090	*Information Line* (202) 942-8088, ext. 3	http://www.sec.gov	*Information Line* (202) 942-8088 (202) 942-7114 (tty)

(continued)

INFORMATION SOURCES (*continued*)

Organization	*General Information*	*Fax Service*	*Internet*	*Recorded Announcements*
United States Department of Commerce	Herbert C. Hoover Building 14th Street between Pennsylvania and Constitution Avenue Washington, D.C. 20230 *General Information* (202) 482-2000	Bureau of Economic Analysis 1441 L Street Washington, D.C. 20230 (202) 606-9600	http://www.doc.gov http://www.bea.doc.gov	*Public Information Office* (202) 606-9900
Telecommunications Industry Association	2001 Pennsylvania Ave., NW, Suite 800 Washington, DC 20006-1813	*General Information* (202) 457-4912	http://www.tiaonline.org	
American Electronics Association	5201 Great American Pkwy., Suite 520 P.O. Box 54990 Santa Clara, CA 95056	*General Information* (408) 987-4200	http://www.aenet.org	
Computing Technology Association	450 E. 22nd Street Suite 230 Lombard, IL 60148	*General Information* (708) 268-1818	http://www.cta.com	

Semiconductor Industry Association	181 Metro Drive Suite 450 San Jose, CA 95110	*General Information* (408) 436-6600	http://www.semichips.org	
American Software Association c/o ITAA	1616 N. Fort Meyer Dr. Suite 1300 Arlington, VA 22209	*General Information* (703) 522-5055	http://www.itaa.org	